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ABSTRACT

In recent years, the mental health community has made great strides in understanding more about the delivery of mental health services, improving efficiency and quality in services, and also about how to build strengths and resilience in the face of life's stresses. This volume adds to the knowledge base so that the important task of system change and expansion of service availability can proceed. Through a knowledge exchange process, this volume seeks to highlight the challenges in the field of mental health and respond with useful information. Chapters include: (1) "Where is Mental Health Likely to Be a Century Hence?" (Ronald W. Manderscheid, Marilyn J. Henderson); (2) "Mental Health Policy in 20th-Century America" (Gerald N. Grob); (3) "Decision Support 2000+: A New Information System for Mental Health" (Marilyn J. Henderson, Sarah L. Minden; Ronald W. Manderscheid); (4) "Information Needs: A Consumer and Family Perspective" (Laura Van Tosh); (5) "Psychiatric Epidemiology: Recent Advances and Future Directions" (Ronald C. Kessler, Elizabeth J. Costello, Kathleen Ries Merikangas, T. Bedirhan Ustun); (6) "Status of National Accountability Efforts at the Millennium" (Ronald W. Manderscheid, Marilyn J. Henderson, David Y. Brown); (7) "Mental Health Policy at the Millennium: Challenges and Opportunities" (David Mechanic); (8) "The Mental Health Economy and Mental Health Economics" (Richard G. Frank, Thomas McGuire); (9) "The Promise and Reality of Managed Behavioral Care" (E. Clarke Ross); (10) "Co-occurring Addictive and Mental Disorders" (Fred C. Osher); (11) "Adult Mental Health Services in the 21st Century" (Mark S. Salzer, Michael Blank, Aileen Rothbard, Trevor Hadley); (12) "Pharmacoepidemiology of Methylphenidate and Other Medications for the Treatment of ADHD" (Julie Magno Zito); (13) "Refugee Mental Health: Issues for the New Millenium" (James Jaranson, Susan Forbes Martin, Solvig Ekblad); (14) "Highlights of Organized mental Health Services in 1998 and Major National and State Trends" (Ronald W. Manderscheid, And Others); (15) "Persons Treated in Specialty Mental Health Care Programs, United States, 1997" (Laura J. Milazzo-Sayre, And Others); (16) "State Mental Health Agency Controlled Expenditures and Revenues for Mental Health Services, FY 1981 to FY 1997" (Ted Lutterman, Michael Hogan); (17) "The 16-State Indicator Pilot Grant Project: Selected Performance Indicators and Implications for Policy- and Decisionmaking" (Olinda Gonzalez, And Others); (18) "The Availability of

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Mental Health Services to Young People in Juvenile Justice Facilities: A National Survey” (Ingrid Goldstrom, Fan Jaiquan, Marilyn Henderson, Alisa Male, Ronald W. Manderscheid); (19) “Estimates of Mental and Emotional Problems, Functional Impairments, and Associated Disability Outsomes for the U.S. Child Population in Households” (Lisa J. Colpe); and (20) “Mental Health Practitioners and Trainees” (Joyce West, And Others). (Contains over 500 references, 64 tables, and 4 appendixes.) (GCP)

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Foreword

It is with great pleasure that we bring you this edition of *Mental Health, United States, 2000*. Our nation has made great strides in recent years in understanding the working of the brain in health and in illness. We also are making great strides in understanding more about the delivery of mental health services, improving efficiency and quality in services, and also about how we can build strengths and resilience in the face of life's stresses.

Our efforts, however, are far from complete. Many individuals find the services they need to be inaccessible, through distance, cost, or coverage limitations. Others are able to access services, but the services may not be fully evidence based, of the highest quality, and respectful of culture, race and ethnicity of the recipient.

This volume adds to the knowledge base so that the important task of system change and expansion of service availability can proceed. The Substance Abuse and Mental Health Services Administration, of which the Center for Mental Health Services is a part, works to accomplish these goals in partnership with many other organizations and groups. We do so through a variety of grants and contracts, but very importantly, through a knowledge exchange process through which we learn of the challenges in the field and respond with useful information. *Mental Health, United States, 2000* is a continuing series addressing these information needs. We hope you will find many uses for the information provided.

Joseph H. Autry, III, M.D.
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Executive Summary

The preparation of *Mental Health, United States, 2000* presented interesting challenges: How could we encapsulate the current status of mental health services for present and future readers? Of equal importance, how could we describe the current development of mental health statistics? To resolve these issues, we construct Section 1 with an editorial on likely future directions and a chapter on where the field has been over the past 100 years. These pieces set the essential context for Section 2, on the current status of mental health statistics; and Section 3, on the current status of mental health services. Each of these sections is new to *Mental Health, United States, 2000*. Section 4, as in all previous editions, updates the national statistical picture for mental health. The paragraphs below provide an executive summary for each of these four sections.

Section 1:
Looking Ahead and Reflecting Upon the Past

In an editorial prospective presented in Chapter 1, Manderscheid and Henderson examine where the mental health system is likely to be a century hence. Four scenarios are constructed to examine changes in the roles persons with mental illness will have in the future and how these changes will interact with simultaneous changes in the treatment of mental illness. The four scenarios predict that human rights will be established as fundamental in our health care system; consumers and family members will seek and be given more responsibility for health and health care; technology will become a primary vehicle for delivering health care; and genetic treatments for biologically based disorders will become routine. Readers are encouraged to help construct the future, not just wait for it to unfold.

In Chapter 2, Grob describes the evolution of the U.S. mental health care system from the end of the 19th century to the end of the 20th. Early in this period, local responsibility diminished in favor of State government and the burgeoning State mental hospital system. This pattern continued unabated until near mid-century, when the appropriateness of institutional care was questioned, and the early outlines of community care were becoming evident. Changes in care concepts, the introduction of medications, changes in financing at the Federal level, and the development of community mental health centers all contributed to the process of deinstitutionalization, which Grob analyzes in detail. Some of the key issues raised by this process gave rise to new forms of integrated community-based care that have shown some success, yet there are still large numbers of homeless and unemployed persons with mental illness, as well as individuals with mental illness in the criminal justice system who have not been effectively reached by this new care system. Much remains to be done as we enter the 21st century.

Section 2:
Status of Mental Health Statistics at the Millennium

In Chapter 3, Henderson, Minden, and Manderscheid present the key outlines of a new developmental mental health information system framework for the 21st century. This work is based on the belief that improving information for the entire field is at the heart of improving the quality of mental health care. Currently, the mental health field has critical needs for improved information as a part of major efforts to improve the quality of care.

CMHS is working to meet those needs. *Decision Support 2000+* is being designed to meet these needs through support for better decisionmaking, accountability, recording of data, simplified reporting at all levels, and continuous quality improvement. Based in the public health model, *Decision Support 2000+* will incorporate data standards for epidemiology and needs assessment; insurance enrollment; encounter, practice guideline, human resource, organizational, and financial information about services; and key quality measures needed in the new managed care environment: outcomes, report cards, and performance indicators. Currently, a requirements analysis is available for comment at the Web site *www.mhsip.org*, and minimum data sets are being completed for each of the domains of measurement. *Decision Support 2000+* has been made possible through developmental work undertaken by the Survey and Analysis Branch Division of State and Community Systems Development, Center for Mental Health Services (CMHS) and the Mental Health Statistics Improvement Program (MHSIP) community.

Van Tosh brings the consumer and family perspective to information in Chapter 4. She asserts that the mental health field needs an excellent information system; a principal application of this information system will be to provide essential information to consumers and family members. Information needs of consumers and families range from types and costs of services to accreditation status and utilization review procedures. Van Tosh also identifies key benefits of *Decision Support 2000+* for consumers and families: reduced fragmentation and increased accountability for services; promotion of visionary policy development; and reinforcement of the link between service delivery and quality of care. The challenges to implementing *Decision Support 2000+* will include guaranteeing informed consent, promoting consumer and family access to medical records, expanding service choice, and ensuring accurate data interpretation and reporting.

In Chapter 5, Kessler, Costello, Merikangas, and Ustin provide a status report on psychiatric epidemiology at the beginning of 21st century. Descriptive psychiatric epidemiology is at a less developed stage for children and adolescents than for adults because of developmental changes that children undergo and the question of who should report for them. For adults, the major surveys carried out over the past quarter-century have produced reliable information on prevalence, age of onset, disability, and treatment. Recently, some have questioned the diagnostic criteria leading to the high prevalence shown in these surveys. The techniques developed in these adult surveys have been applied to clinical epidemiological surveys as well. Surveys of elderly persons represent a new frontier. Challenges that need to be faced in the future include underreporting and production of estimates for small geographical areas.

Analytical and experimental psychiatric epidemiology are much less developed than are descriptive and clinical epidemiology. However, new work is emerging on modifiable risk factors and preventive interventions; psychiatric epidemiologists need more involvement in these endeavors. Areas of psychiatric epidemiology that show particular promise for the future include application of developmental principles to child and adolescent disorders and to comorbidity; genetic epidemiology; and work on barriers to help seeking. Likely future challenges include linking multiple risk factors with multiple outcomes; integrating psychiatric epidemiology with prevention science and social policy analysis; initiating more work on secondary prevention; and understanding the determinants of help-seeking behavior.

Chapter 6 authors Manderscheid, Henderson, and Brown offer a status report on national accountability efforts in mental health. Quality accountability can refer to practices, outcomes, plan performance, or system performance. Criteria to judge quality tools in each of these areas include simplicity, communality, and appropriateness. Clinical practice guidelines are being developed, but not in a consistent way; system practice guidelines are in their infancy. The Practice Guideline Coalition seeks to reduce the variability in clinical practice guidelines and related measures; both will receive increased attention in the future. Outcome measures can help identify effective practices and provide a vehicle for future reimbursement. Field work is under way to develop outcome measures for both children and adults.

An important development is person-centered outcomes and related consumer surveys. In the near term, calibration work among instruments will be a high priority. Report cards have emerged in the past 5 years to provide an overview of plan performance. The *MHSIP Consumer-Oriented Report Card* is currently being tested by 40 States. In the future, report cards will describe not only plan performance, but contributions to the community as well. The development of performance indicators has paralleled that of report cards. The CMHS is working with both States and the private sector to develop performance indicator systems. This work shows considerable promise. Overall, the tension will continue between the need for common accountability tools and the uniqueness demanded at a time when mental health services are considered to be a commodity.

Section 3: Status of Mental Health Services at the Millennium

In Chapter 7, Mechanic sets the framework for the section by examining the challenges and opportunities mental health policy confronts at the millennium. He notes that the past 50 years have witnessed extraordinary improvements in mental health insurance coverage and care. At the 20th century's end, managed care is further accelerating the transformation of the field. Within this context, Mechanic reviews the gains and unanticipated consequences of mental health policy in six areas: deinstitutionalization, improved treatment technologies, mental health parity, the legal context and criminal justice services, managed behavioral health care, and the growth of consumer and family involvement. Deinstitutionalization has been the most enduring change of the past 50 years, but service networks have yet to be built in many communities, and many persons with mental illness have been criminalized. Through sustained research, improved treatment technologies have emerged, including better drug therapies and better psychosocial management approaches, but much remains to be learned about mental illness. Progress is being made in adopting parity for mental health insurance coverage, yet agreement does not exist on the scope of the population to be covered. The Americans with Disabilities Act and the *Olmstead* Supreme Court decision have promoted community living for persons with mental illness, but new restrictions, such as outpatient commitment, have grown apace. Managed behavioral health care has improved the focus on quality of care and outcome, yet the carveouts have prevented needed service integration. The consumer and family movements, particularly the National Alliance for the Mentally Ill, have grown exponentially in the past 20 years, but full integration of consumer and family initiatives remains in its infancy. Clearly, future advances will be contingent upon learning more about mental illness and evolving appropriate policy to consolidate the new knowledge and to learn from past mistakes.

Frank and McGuire review the transformations of the mental health economy and mental health economics over the past 50 years in Chapter 8. Central to their review is the notion that we have moved from a predominantly planned mental health economy in the 1950's to a predominantly market economy at present. Frank and McGuire attribute this change to several factors, including a decrease in the relative role of government as a payer for mental health care and the emergence of private markets between 1965 and 1985. The latter factor is partially attributable to the emergence of Medicare and Medicaid payment systems, the growth and increasing range of mental health professionals, the evolution of improved treatments, and the rapid growth of managed behavioral health care over the past decade. What has been learned over this 50-year period? The authors list four factors: financial incentives do influence the volume and quality of care; markets can fail, resulting in differential copayments; managed care can control spending without limiting insurance coverage; outcome returns from mental health care are substantial and improving. In this context, Frank and McGuire conclude that mental health economics will have a major role in policy formulation as we enter the 21st century.

In Chapter 9, Ross examines the promise and the reality of managed behavioral health care. Managed care has changed the landscape of modern mental health care. The most recent statistics available show that almost 177 million Americans have their behavioral health care benefits managed by one of the managed behavioral health care organizations, and an additional 19 million are in a health maintenance organization (HMO). Yet, at least eight major issues are confronting managed behavioral health care: ability to control cost; substitution of types of mental health services; adequacy of services; seamless systems of care; medical necessity vs. clinical necessity vs. human necessity; public accountability; consumer, family, and enrollee participation; and forms of delivery. Clearly, managed behavioral health care can control costs. Cost control is accomplished through substitution of ambulatory for inpatient services and the use of medical necessity criteria. Thus, a question arises as to whether sufficient resources are being expended for the care of persons with severe mental illnesses. Good systems of care must have clear boundaries and responsibilities among components, or the components must be integrated; neither situation prevails currently. Public accountability is in its infancy, particularly around outcome and consumer-oriented measures, and the comparative effects of the different models of managed care are only dimly understood. Consumer, family, and enrollee participation is rare in key aspects of services. Ross concludes that managed care has overpromised what it can deliver.

Chapter 10 author Osher presents the latest information on the prevalence and treatment of

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co-occurring mental and addictive disorders. The current estimate of the annual prevalence of such disorders is approximately 10 million persons. Although identification and characterization of persons with these disorders remains difficult, several factors are known: Persons with co-occurring disorders are much more likely to seek mental health and substance abuse services, and persons with particular mental disorders are more likely to develop substance abuse disorders at a later point. Achieving good outcomes is difficult. Over the past decade, research and professional consensus have converged on comprehensive, integrated care as the preferred method of treatment. Care must be based on the principles of acceptance, accessibility, integration, continuity, individualized treatment, comprehensiveness, quality, responsible implementation, and optimism and recovery. New models are being developed to share responsibility for this population among primary care, mental health, and substance abuse providers depending on severity and the exact combination of disorders, and to detail how integrated services can be developed. Osher concludes that the failure to implement comprehensive care for persons with co-occurring disorders is a failure of clinical and administrative leadership.

In Chapter 11, Salzer, Blank, Rothbard, and Hadley provide an overview of the status of adult mental health services at the beginning of the 21st century. They note that the changes in mental health services over the past three decades rival developments that have occurred over the two centuries since the Colonial period. The authors then review four key factors that have influenced the current status of adult mental health services: service planning, financing and service organization, development of community long-term care supports, and the rapid evolution of psychopharmacological and psychosocial interventions. The recent history of service planning derives partly from the history of modern mental health epidemiology, as well as the growth of the Community Support Program philosophy and a consumer orientation characterized by informal care, self-help, and consumer and family networks. For the past decade, financing has been dominated by managed behavioral health care, which has resulted in increased cost controls and rapid movement toward service integration. Services have moved from institutions to communities, with several waves of deinstitutionalization. Community services have benefited from the development of the Program of Assertive Community Treatment, together with other long-term residential supports. Psychopharmacology has advanced rapidly over the past decade, and psychosocial interventions have proven their effectiveness during this period. Yet the adult services field still confronts several major challenges, including the difficulties associated with translating research findings into effective practices and the lack of adherence to practice guidelines known to be effective. The authors conclude that cautious, but not undue, optimism is warranted.

Chapter 12 author Zito presents results from a study of change in pharmacotherapy for the treatment of attention deficit hyperactivity disorder (ADHD). From Medicaid records in two States and the records of an HMO, the author was able to show large increases in the prescription of stimulants over a 10-year interval. Stimulant use increased more than 600 percent for those under age 20 in the HMO; stimulant use among 5- to 14-year-olds was twofold greater in the Medicaid setting than in the HMO. Differences were observed by age, gender, race, and geographic locale. Increased medication use appears to be related to a larger number of youths in treatment, longer times in treatment, and concurrent use of stimulants and ancillary medications. Other related factors include less stringent diagnostic criteria; increasing identification of comorbidities, such as depression; and the large role of primary care practices in treating ADHD. Zito concludes by calling for careful consideration of the appropriateness, safety, and long-term effectiveness of current pharmacotherapy prescription practices.[1]

In Chapter 13, Jaranson, Martin, and Ekblad provide a status report on the epidemiology and mental health care of refugees—persons who are outside the country of their nationality because of fear of being persecuted. In 1999, there were an estimated 13.5 million refugees worldwide, down from almost 17 million at the beginning of the decade. The largest number was in the Middle East (6 million), followed by Africa (3 million), Europe and South Asia (1.7 million each), the Americas (750 thousand), and East Asia and the Pacific (500 thousand). The decrease in number of refugees is due to repatriation, as well as an increased difficulty in finding countries willing to accept them. U.S. policies and practices on accepting refugees are reviewed from this point of view. Refugees are at particular risk not only for developing mental disorders, but also for failing to receive treatment for their illnesses. Risk factors for poor mental health include marginalization and minority status, socioeconomic disadvantage, poor physical health, starvation and malnutrition, head trauma and injuries, collapse of social supports, mental trauma, and difficulty in adapting to host cultures. The most common mental health problems include anxiety disorders, such as post-traumatic stress disorder (PTSD); depressive disorders; suicidal ideation and attempts; anger, aggression, and violent behavior; drug and alcohol abuse; paranoia, suspicion, and distrust; somatization and hysteria; and sleeplessness. Some studies of refugees have found PTSD rates in excess of 50 percent, while others have found elevated rates of anxiety and depression. Coping factors include availability of extended family, access to employment, participation in self-help groups, and situational transcendence. To be most effective, good-quality mental health care must be coupled with a health infrastructure based on primary care. However, since many refugees do not get formal help, it is important to train community members to recognize signs and symptoms of mental health problems so that informal support can be provided. Additional research is needed on mental health care for refugees, but linkages among scientists, service providers, and policy makers are equally important if progress is to be made in improving care delivery.

Section 4: Key Elements of the National Statistical Picture

Chapter 14 authors Manderscheid, Atay, Hernandez-Cartegena, Edmond, Male, Parker, Zhang, and Edmond provide an overview of mental health organizations in 1998, together with major national and State trends. In 1998, a total of 5,722 mental health organizations were operating. These organizations maintained 261,903 inpatient and residential treatment beds. Inpatient and residential treatment additions numbered 2,313,594, and additions to less than 24-hour services numbered 3,967,019. Residents of inpatient and residential treatment services on the first day of the year numbered 215,798. Total episodes of care in mental health organizations in 1998 grew to 10,714,398. In conjunction with these findings from 1998, the chapter also presents 1994 staffing and financial data for all mental health organizations and trend data for selected years back to 1970. Episode data from 1955, the year that marks the beginning of deinstitutionalization for the State mental hospitals, are contrasted with episode data for 1998. Policy implications of the observed trends are discussed, and State maps are presented for 1998 inpatient and residential treatment beds and additions, and for additions to less than 24-hour services. All results are from the Survey of Mental Health Organizations and General Hospital Mental Health Services.

In Chapter 15, Milazzo-Sayre, Henderson, Manderscheid, Bokossa, Evans, and Male provide an overview of the characteristics of persons treated in specialty mental health programs during 1997. Results derive from the CMHS 1997 Client/Patient Sample Survey. Overall, approximately 2.3 million persons were under care and 5.5 million persons were admitted during 1997 to specialty mental health inpatient, residential, and less than 24-hour care programs. Admissions outnumbered the under-care population by a wide margin in all three program types, and this differential was most dramatic for inpatient care programs. More males than females were treated in inpatient and residential programs, while both genders were fairly evenly represented in less than 24-hour settings. Although Whites comprised the preponderance of persons receiving services in 1997, American Indians/Alaska Natives and Blacks/African Americans showed higher rates of care relative to their numbers in the population. Admissions tended to be younger than persons under care in each of the three program types. Persons with a principal diagnosis of schizophrenia comprised fairly large proportions of the caseloads in each program type but were more predominant in inpatient and residential care programs. For each program type, further detail is provided in the chapter for persons under care and persons admitted to each of the types of facilities surveyed.

Lutterman and Hogan present an analysis of the expenditures and revenues of State mental health agencies (SMHAs) between 1981 and 1997 in Chapter 16. In 1997, the SMHAs expended more than $16 billion for mental health services. Although this number reflects an overall increase over the $14.2 billion expended in 1993 and the $12.1 billion expended in 1990, when the expenditures are adjusted for inflation, actual expenditures decreased 7 percent between 1990 and 1997. This decrease is due principally to the fact that SMHA expenditures declined from 2.12 percent to 1.8 percent of State government expenditures during this period. Of note, community-based services represented 56 percent of total expenditures in 1997, compared with 41 percent for State mental hospitals. SMHAs exhibited wide variability in their per capita expenditure patterns; geographic regions of the United States showed less variability among the SMHAs. Expenditure patterns are also presented for different types of mental health services, including forensic services, and for psychiatric medications. SMHA funding came from State government tax revenues ($11.4 billion); the Federal Government, principally through Medicaid ($4 billion); first- and third-party payments ($822 million); and local government ($95 million). The Community Mental Health Services Block Grant has declined from 2.4 percent of expenditures to 1.5 percent of expenditures between 1990 and 1997.

In Chapter 17, Gonzalez, Hall, Pandiani, McGrew, Elliott, Volo, Davis, Smith, and Callahan examine several of the performance indicators from the *16-State Indicator Pilot Project* to highlight policy and decisionmaking implications of these indicators and related data. *The 16-State Project* is a joint effort of the CMHS, the National Association of State Mental Health Program Directors, and the SMHAs to define, test, and implement a set of 32 performance indicators for the SMHAs. The goal is to produce performance results so that States can be compared meaningfully and a national data base produced. The indicators in the project derive principally from the *MHSIP Consumer-Oriented Report Card* and the National Association of State Mental Health Program Directors Framework for Performance Indicators. The chapter covers the following performance indicators: access, active participation, quality, and outcomes from the *Mental Health Statistics Improvement Program Consumer Survey;* State psychiatric hospital utilization patterns; assertive community treatment and supported employment; new generation antipsychotic medications; readmission to a State psychiatric hospital within 30 days of discharge; consumers contacted by community providers within 7 days of hospital discharge; improvement in functioning and reduction in symptoms; and cost. The 16-State Project is approximately two-thirds completed at present.

Chapter 18 authors Goldstrom, Jaiquan, Henderson, Male, and Manderscheid report results from the first national survey ever conducted on the availability and use of mental health services in residential juvenile justice facilities. Of the 113,000 children and adolescents in residential placements on any given day, at least 20 percent have a serious emotional disturbance. Overall, 94 percent of the juvenile justice facilities provide access to at least one mental health service. Facilities generally are more likely to provide medication therapy and emergency mental health services than screening and evaluation. Approximately three out of five facilities provide access to a psychiatrist. A large percentage of juvenile justice facilities work with outside organizations, such as community mental health centers and social service agencies, to provide the mental health services offered to youth in juvenile justice facilities. This survey is the third in a series on mental health services in correctional settings. The previous two have covered State prisons and local jails; results from these surveys have been published in previous editions of *Mental Health, United States*.

In Chapter 19, Colpe provides estimates for children and adolescents with psychiatric problems and related disabilities from the *National Health Interview Survey on Disability*. The survey covers the civilian noninstitutional population; the estimates are for children ages 5 to 17. Overall, Colpe estimates the population of children and adolescents with a psychiatric problem and/or a related significant behavioral impairment to be 4,106,000. Sub-estimates are as follows: those with a significant behavioral impairment but no psychiatric problem (2,230,000); those with a psychiatric problem but no significant behavioral impairment (529,000); those with a psychiatric problem and a significant behavioral impairment (1,347,000). The overall rate is 8.4 percent; this estimate is similar to estimates of 9 to 13 percent produced by the CMHS for children and adolescents, ages 9 to 17, with serious emotional disturbance. Among children and adolescents with a psychiatric problem or a related significant behavioral impairment, about two-thirds were male; one-third were from minority populations; two-thirds were from two-parent families; and more than half were from families with incomes in the poverty range. As a result of their problems, about 40 percent experienced a limitation in school activities, and more than 12 percent missed one or more school days in the past 2 weeks. About 19 percent were currently seeing a mental health provider, and an additional 11 percent had received therapy services in the past 12 months.

Chapter 20 continues a series begun in *Mental Health, United States, 1990,* to provide periodic updates on the size and composition of the human resources in mental health and the number of trainees preparing to work in the field. The authors of this chapter represent each of the disciplines that comprise the mental health field. This chapter provides a description of the demographic and training characteristics and professional activities of psychiatrists, psychologists, social workers, psychiatric nurses, counselors, marriage and family therapists, psychosocial rehabilitation counselors, school psychologists, and sociologists. Information includes the total number in each discipline, by year; their sex, age, and racial/ethnic composition; their distribution by State and region; their years since completion of highest professional degree; their employment status and setting; and their distribution of work activities. Information on trainees is presented for each of the same disciplines by year. In *Mental Health, United States, 1998,* a new minimum data set was presented for human resources in mental health. This minimum data set is currently being tested in the field as part of the overall effort to improve data standards.

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[1] *Editors' note:* A related piece of research, released since the preparation of Chapter 12, provides evidence regarding the efficacy of different types of treatment for ADHD. Jensen and colleagues (2000) conducted a clinical trial with 579 children randomly assigned to either routine community care or one of three study delivered treatments (monthly medication management following weekly titration; intensive behavioral treatment; and the combination), each lasting 14 months. Results showed that the combination and medication management interventions were substantially superior to the intensive behavioral intervention and routine community care for ADHD symptoms. For other functional domains (social skills, academics, parent-child relations, oppositional behavior, and anxiety/depression), results suggested slight advantages of the combined treatment over single treatments or routine community care.

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Section 1: Looking Ahead and Reflecting Upon the Past

Chapter 1

Where Is Mental Health Likely to Be a Century Hence? An Editorial Perspective

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Introduction

As we prepare this edition of *Mental Health, United States,* we think it important to provide some hints about the future of mental health from the vantage point of a new century. We do this with trepidation. A century hence, what we portray here will be judged from the perspective of hindsight. Nevertheless, we believe that the 21st century will offer exciting and sometimes astonishing developments for all areas of health, including mental health.

In mental health, we expect developments to occur across a broad spectrum over the next century. Below, we have tried to capture these trends in four predictions or scenarios. These predictions relate to the roles we will assign to persons with mental illness in our society in the future and to how mental illness will be treated. Clearly, these two areas interact with each other. Their interaction will be a major determinant in how each prediction fares.

Major Predictions

Human rights will be established as fundamental in our health care system. It seems strangely odd that the major human rights abuses of the 20th century have not yet stimulated protections that are codified in our culture and our laws. Major efforts are currently under way to guarantee patients' rights in the health care system and consumer and family rights in mental health. These efforts are reflective of an underlying civil rights concern that portends further change. Human rights, patient rights, consumer rights, and family rights are mutually reinforcing. A new organization, Public Health Advocates, is emerging. This entity will serve as a rallying point in all local communities for advocacy about all health care issues. Clearly, people want change in the health care system and they are willing to organize to achieve it.

We expect these current efforts to culminate in significant human rights protections with regard to health care. For mental health, this will include protections that ensure the right to human dignity, the right to choose care and to participate in decisions about care, the right to provide feedback about the quality of care, and the right to expect that care will result in significant improvement.

Such rights will mean little unless fundamental needs are also met. Included are such basic needs as communities that protect against violence, adequate housing and appropriate education for all, and productive roles that promote self-esteem and well-being. We expect significant progress to be made over the next century in each of these areas as well.

Consumers and family members will seek and be given more responsibility for health and health care. Major growth in self- and peer-support activities is indicative of a shift in the balance of consumer and provider roles in the health care system. We now speak of consumer- and family-centered services and consumer- and family-centered outcomes in mental health care. These momentous changes would have been unthinkable only a few short years ago.

Growth of consumer and family rights in mental health will be accompanied by an expansion of responsibility for one's own well-being. If efforts to promote mental well-being and to intervene early in mental health problems are to be successful, nothing less will suffice. Clearly, we are moving toward a prevention and early intervention focus.

We expect the focus on human rights and the focus on prevention and early intervention to lead to an expansion of individual responsibility for one's own health in the 21st century. To be successful, these shifts must be accompanied by appropriate training and broad availability of information to aid decision and action. In mental health, expansion of consumer and family responsibility will take the form of decisionmaking about personal prevention and intervention activities, as well as decisionmaking about what types of care will be deemed appropriate and what the course of care will be. Self- and peer-support activities will expand dramatically to provide the necessary information and support to facilitate these decisions.

Technology will become a primary vehicle for delivering health care. At the present time, telecommunication, computer, and Internet technology are being linked to offer "care at a distance." In other words, the technology has been used to link consumers and providers much as one would have used a telephone in the past. Thus, several thousand websites offer psychotherapy. Such efforts represent only a primitive beginning to a technology revolution that will sweep through the health care system.

Rapid advances are being made in voice-activated automated response systems and in the application of artificial intelligence systems to real-world problems. Efforts are currently under way, for example, to develop websites that incorporate artificial intelligence systems without real-time participation by providers. These systems are being designed to learn about consumers through interaction with them and then to provide customized therapy based upon the responses consumers offer. A simple example is a current website that provides advice about depression.

At the same time, other systems are being developed to permit people to remain in their homes and yet to monitor their health status from day to day. Such systems will increase the independence of many frail elderly and disabled persons. It will also expand dramatically our capacity to provide care to these populations.

We expect that the new technology will advance to the point that many tasks now carried out by providers will ultimately be carried out by artificial intelligence systems. The Internet, video cable systems, and wireless communication will all serve as channels to provide this care. Mental health seems to be particularly suited to this new technology, since much of the care provided is based upon human interaction. Care must be exercised to ensure quality of service delivery through such systems.

Genetic treatments for biologically based disorders will become routine. As of publication, the first complete mapping of the human genome has just been completed. This map will provide the foundation for us to identify, treat, and prevent genetically based disorders. Genetic interventions will advance rapidly once the map is available because biotechnology firms are already poised to identify and test new interventions.

We expect that genetic interventions for biologically based mental disorders will be commonplace by the end of the 21st century. Results will be both revolutionary and breathtaking. Imagine for a moment the *elimination* of genetically based diseases. This is clearly within our grasp.

Final Word

The four major predictions identified here need to occur simultaneously if the best outcomes are to be achieved by the end of the 21st century. For example, extensive genetic engineering without human rights protections would constitute a disaster from our point of view. We also assert that our future needs to be created. We should not just wait for events to unfold. Each of us has a major role to play in constructing the future we desire.

Chapter 2

Mental Health Policy in 20th-Century America

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In mid-19th-century America, the asylum was widely regarded as the symbol of an enlightened and progressive nation that no longer ignored or mistreated its insane citizens. The justification for asylums appeared self-evident: they benefited the community, the family, and the individual by offering effective medical treatment for acute cases and humane custodial care for chronic cases. In providing for persons with mental illness, the State met its ethical and moral responsibilities and, at the same time, contributed to the general welfare. After World War II, by way of contrast, the mental hospital began to be perceived as the vestigial remnant of a bygone age. Increasingly, the emphasis was on prevention and the provision of care and treatment in the community. Indeed, during the 1960's, many mental health professionals were fond of referring to a new psychiatric revolution equal in significance to the first revolution begun by Philippe Pinel, who allegedly removed the chains of Parisian "lunatics" in 1793. The new policy, in short, assumed the virtual abolition of traditional mental hospitals and the creation in their place of community alternatives.

What elements shaped the transition from an institutional- to a community-based policy? The answer to this question is more complex than is commonly recognized, for the foundations of change had their origins in the late 19th century. Public policies, after all, are more often than not evolutionary in nature; only rarely do they emerge in some novel form following a cataclysmic event. Mental health policies were no exception; the changes that occurred after 1945 were linked with earlier developments.

Origins of Change

Of major significance in preparing the foundations for new community-oriented policies was the change in the nature of the patient population of mental hospitals after 1890. Between the 1830's and 1880's, the proportion of persons with long-term care in hospitals was relatively low as compared with the extraordinary high percentage between 1890 and 1950. Funding patterns played a key role in inhibiting the increase in this caseload. In general, State legislatures provided the capital funds necessary for acquiring new sites and constructing, expanding, and renovating existing physical plants. Local communities, on the other hand, were required to pay hospitals a sum equal to the actual cost of care and treatment of each patient admitted. The system, moreover, did not assume that every person with mental illness would be cared for in a State institution. Laws generally required that only persons with mental illness who were dangerous had to be sent to State hospitals. Others who presumably could benefit from therapeutic interventions (and, thus, ultimately be removed from welfare rolls) could, at the discretion of local officials, also be institutionalized. The system, in short, involved divided responsibility. For much of the 19th century, therefore, a significant proportion of persons with mental illnesses either continued to live in the community or else were kept in municipal almshouses. Families with sufficient resources could commit their relatives to State institutions, provided they were willing to assume financial liability for their upkeep. States, moreover, had to reimburse hospitals for those patients who had not established legal residency, such as immigrants. The result was a variegated pattern (Grob, 1994b).

Divided responsibility for persons with mental illness had significant repercussions. The system tended to promote competition and rivalries between overlapping governmental jurisdictions. In many States, the stipulation that individual communities were financially liable for their poor and indigent "insane" residents created incentives for local officials to keep them in almshouses where costs were lower. Hospital officials often faced unremitting pressure from communities to discharge patients—irrespective of their condition—in order to save money. Local officials occasionally even attempted to force hospitals to reimburse the community for work performed by patients, though such labor was frequently considered to be part of a therapeutic regimen. Ironically, divided fiscal and government authority had the paradoxical effect of keeping persons with long-term care needs in mental hospitals at relatively low levels (Grob, 1973, 1983).

As the number of persons with long-term care increased, however, States slowly began to reconsider their policies. Disillusioned by a system that divided authority, States—led by New York and Massachusetts—adopted legislation that relieved local communities of any role whatsoever in caring for people with mental illness. The assumption of those who favored centralization was that local care, although less expensive, was substandard and fostered chronicity and dependency. Conversely, care and treatment in hospitals, though more costly initially, would be cheaper in the long run because it would enhance the odds of recovery for some and provide more humane care for others (Grob, 1983).

Although the intent of State assumption of responsibility was to ensure that persons with mental illnesses would receive a higher quality of care and treatment, the consequences in actual practice turned out to be quite different. In brief, local officials saw in the new laws a golden opportunity to shift some of their financial obligations onto the State. The purpose of the legislation was self-evident, namely, to remove the care of people with long-term mental illness from local jurisdictions. But local officials went beyond the intent of the law. Traditionally, 19th-century almshouses (which were supported and administered by local governments) served in part as old-age homes for senile and aged persons without any financial resources. The passage of State care acts provided local officials with an unexpected opportunity. They proceeded to redefine senility in psychiatric terms and thus began to transfer aged persons from local almshouses to State mental hospitals. Humanitarian concerns played a relatively minor role in this development; economic considerations were of paramount significance (Grob, 1983).

Faced with an opportunity to shrink expenditures, communities were more than happy to transfer responsibility for their aged residents to State-supported facilities. Between 1880 and 1920, therefore, the almshouse populations (for this and other reasons) dropped precipitously. Admissions fell from 99.5 to 58.4 per 100,000 between 1904 and 1922. The decline in the number of persons with mental illness aged 60 and over was even sharper, dropping from 24.3 percent in 1880 to 5.6 percent in 1923 (U.S. Bureau of the Census, 1906a, 1906b, 1915, 1925, 1926). What occurred, however, was not a deinstitutionalization movement, but rather a lateral transfer of individuals from one institution to another.

During the first half of the 20th century, as a result, the character of mental hospitals underwent a dramatic transformation. By 1904, only 27.8 percent of the total patient population had been institutionalized for 12 months or less. Six years later this percentage fell to 12.7, although it rose to 17.4 in 1923. The greatest change, however, came among patients hospitalized for 5 years or more. In 1904 39.2 percent of patients fell into this category; in 1910 and 1923 the respective percentages were 52.0 and 54.0 (U.S. Bureau of the Census, 1906b, 1914, 1925). Although data for the United States as a whole were unavailable after 1923, the experiences of Massachusetts are illustrative: by the 1930's, nearly 80 percent of its mental hospital beds were occupied by persons with long-term care needs (Dayton, 1940).

Chronicity, however, is a somewhat misleading term for persons with long-term care needs, for the group that it described was actually heterogeneous. The aged (over 60 or 65) constituted by far the single largest component. By 1920, for example, 18 percent of all first admissions to New York State mental hospitals were diagnosed with psychoses because of senility or arteriosclerosis; 20 years later the figure had risen to 31 percent. A decade later 40 percent of all first admissions were aged 60 and over, as compared with only 13.2 percent of the State's total population (Malzberg, 1949, 1954; New York State Department of Mental Hygiene, 1939–1940). The increase in the absolute number also reflected a change in age-specific admission rates. In their classic study of rates of institutionalization covering more than a century, Goldhamer and Marshall found that the greatest increase occurred in the older category. In 1855, the age-specific first-admission rate in Massachusetts aged 60 and over was 70.4 for males and 65.5 for females (per 100,000); by the beginning of World War II, the corresponding figures were 279.5 and 223.0 (Goldhamer & Marshall, 1953). As late as 1958, nearly a third of all resident State hospital patients were over age 65 (American Psychiatric Association, 1960).

The rising age distribution mirrored a different but related characteristic of people in institutions, namely, the presence of large numbers of patients whose abnormal behavior reflected an underlying somatic etiology. Even allowing for imprecise diagnoses and an imperfect statistical reporting system, it was quite evident that a significant proportion of the hospitalized population suffered from severe organic disorders for which there were no effective treatments. Of 49,116 first admissions in 1922 admitted because of various psychoses, 16,407 suffered from a variety of identifiable somatic conditions (senility, cerebral arteriosclerosis, paresis, Huntington's chorea, brain tumors, etc.). Between 1922 and 1940, the proportion of such patients increased from 33.4 to 42.4 percent. In 1946 various forms of senility and paresis accounted for about half of all first admissions (Kramer, 1976; U.S. Bureau of the Census, 1925, 1930, 1943).

The change in the character of mental hospitals also altered their links with psychiatry. Trained as physicians, psychiatrists clearly preferred a therapeutic rather than a custodial role. Yet, the institutional context in which they practiced in the early 20th century was hardly conducive to the pursuit of the former. Moreover, the rise of modern "scientific" medicine appeared to accentuate still further the seemingly obsolescent character of psychiatry. Under such circumstances, it was understandable that psychiatrists between 1890 and World War II began to redefine the concepts of mental disorders and therapeutic interventions, as well as the very context in which they practiced. In so doing, they began to distance themselves from traditional mental hospitals, which—unlike their 19th-century predecessors—had large numbers of long-term and especially aged patients whose need for general care was paramount.

The Attack on Mental Hospitals and Creation of New Community Policies

By the mid-1940's it had become clear that the character of mental hospitals had been transformed by the nature of their patient populations. The presence of so many aged persons and other patients suffering from such diseases as irreversible somatic disorders signified that institutions were providing custodial care for those who would remain until they died. In the immediate postwar years, journalists and mental health professionals alike published numerous critical accounts of mental hospitals even though their analyses were not always accurate. Admittedly, a decade-and-a-half of financial neglect, due largely to the combined impact of the Great Depression of the 1930's and global conflict of the 1940's, simply exacerbated already existing severe problems. It is frequently supposed that the depressing state of mental hospitals was as much a function of the nature of their patients as it was the result of parsimonious or callous policies. The large number of persons with long-term care needs was considered the single most significant element in shaping a milieu seemingly antithetical to therapeutic goals.

Mental hospitals—institutions that had been the cornerstone of public policy for nearly a century and a half—slowly began to lose their social and medical legitimacy. This was hardly surprising. Indeed, after World War II the prevailing consensus on mental health policy slowly began to dissolve. Developments converged to reshape public policy during these years. First, there was a shift in psychiatric thinking toward a psychodynamic and psychoanalytic model emphasizing life experiences and the role of socioenvironmental factors. Second, the experiences of World War II appeared to demonstrate the efficacy of community and outpatient treatment of persons with mental illness. Third, the belief that early intervention in the community would be effective in preventing subsequent hospitalization became popular. Fourth, a faith developed that psychiatry could promote prevention by contributing toward the amelioration of social problems that allegedly fostered mental diseases. Fifth, the introduction of psychological and somatic therapies (including, but not limited to, psychotropic drugs) held out the promise of a more normal existence for patients outside of mental institutions. Finally, an enhanced social welfare role of the Federal Government not only began to diminish the authority of State governments, but also hastened the transition from an institutionally based to a community-oriented policy (Grob, 1991).

Winds of change were evident well before the widespread use of psychotropic drugs or the advent of "deinstitutionalization" (an often misunderstood and misleading term). The specialty of psychiatry, long synonymous with institutional care, rapidly changed its character in the postwar era. To be sure, psychiatrists began to find careers outside of public institutions in the interwar decades. But after 1945 there was a mass exodus of psychiatrists from mental hospitals into private and community practice. Within a decade more than 80 percent of the 10,000 members of the American Psychiatric Association (APA) were employed outside of mental hospitals. Their positions were taken by foreign medical graduates with little or no training in psychiatry (*Biographical Directory*, 1958; Boyd, 1958). Although the APA staff continued to work with public hospitals, they were neither knowledgeable about nor sympathetic toward their institutional brethren and often emphasized the desirability of noninstitutional alternatives. Moreover, most psychiatrists in the community treated large numbers of patients with psychological problems; thus, their contacts with persons who had long-term care needs were sharply reduced. That hospitals had a large proportion of such patients hardly accorded with the self-image of the psychiatrist as an active and successful therapist.

The weakening of the long-established links between hospitals and psychiatrists also was accompanied by a movement to strengthen outpatient and community clinics. Before 1940, such clinics had dealt predominantly with children rather than adults. The postwar enthusiasm for clinics received momentum with the passage of the National Mental Health Act of 1946, which provided grants to States to support existing outpatient facilities or to establish new ones. The ultimate goal, according to Robert H. Felix, first director of the National Institute of Mental Health (NIMH), was one outpatient facility for each 100,000 persons. Although appropriations were modest, their impact was dramatic. Before 1948, more than half of all States had no clinics; by 1949, all but five had one or more. Six years later, there were about 1,234 outpatient psychiatric clinics, of which about two-thirds were State-supported or aided. Psychiatrists proved staunch proponents of a community-oriented policy, for they insisted that early identification and treatment in outpatient facilities or private offices diminished the need for subsequent hospitalization and were also cost effective (Grob, 1991).

During the 1950's support for a community-based policy increased steadily; the Governors' Conference and Council of State Governments, as well as private foundations such as the Milbank Memorial Fund, played important roles in marshalling support for innovation. In 1954, New York enacted its influential Community Mental Health Services Act, which provided State funding for outpatient clinics; California followed suit shortly thereafter with the passage of the Short-Doyle Act. By 1959, there were more than 1,400 clinics serving about 502,000 individuals, of whom 294,000 were over the age of 18 (Gains in outpatient, 1960; Norman, Rosen, & Bahn, 1962). The expansion of community facilities was accompanied also by new services to schools, courts, and social agencies by nonmedical mental health professionals. This development offered further proof of the degree to which the public sought, if not demanded, access to psychiatric and psychological services in noninstitutional settings. During these years, Robert Felix and his NIMH colleagues used their links with key congressional figures to enhance the policymaking authority of the Federal government as a vehicle to strengthen community policies (Grob, 1991).

Many of the claims about the efficacy of community care and treatment, however, rested on extraordinarily shaky foundations. The presumption was that outpatient psychiatric clinics could identify early cases of mental disorders and serve as alternatives to mental hospitals. The empirical data to validate such assertions, however, were lacking. Indeed, a study of about 500 patients in three California State hospitals during the 1950's found most of the patients unsuited to treatment in clinics (Sampson, Ross, Engle, & Livson, 1958). Data collected by Morton Kramer and his associates at the Biometrics Branch of NIMH found equally serious problems. A community policy was based on the expectation that patients could be treated outside of institutions. Underlying this belief were several assumptions: (1) the patient had a home; (2) the patient had a sympathetic family or other person willing and able to assume responsibility for his or her care; (3) the organization of the household would not impede rehabilitation; and (4) the patient's presence would not cause undue hardships for other family members. In 1960, however, 48 percent of the mental hospital population were unmarried, 12 percent were widowed, and 13 percent were divorced or separated. A large proportion of patients, in other words, may have had no families to care for them. Hence the assumption that patients could reside in the community with their families while undergoing rehabilitation was hardly realistic (Kramer, 1967a, 1967b; Kramer, Taube, & Starr, 1968).

Such findings fell on deaf ears; the rhetoric of community care and treatment carried the day in the 1950's and 1960's. Too often, exaggerated claims were overlooked or ignored. Yet, rhetoric cannot be dismissed so easily: it shaped agendas and debates; it created expectations that in turn molded policies; and it informed the socialization, training, and education of those in professional occupations. From the creation of the Joint Commission on Mental Illness and Health in 1955 and the publication of its influential *Action for Mental Health: Final Report of the Joint Commission on Mental Illness and Health 1961* to the passage of the Community Mental Health Centers Act of 1963, the advocates of a community-oriented policy succeeded in forging a consensus regarding the desirability of diminishing the central role of mental hospitals and strengthening community facilities. They were joined by a variety of other individuals and groups. Psychiatric critics (e.g., Thomas Szasz, Thomas J. Scheff) attacked the very legitimacy of the concept of mental illnesses; civil rights advocates identified persons with mental illness as a group systematically deprived of constitutional liberties; and social activists emphasized that institutions such as mental hospitals could never be other than repressive and dehumanizing institutions. The result was a determined and partially successful effort to reshape public policy by diminishing the role of hospitals and enhancing the significance of outpatient and community services (Grob, 1991).

During the 1960's, the attack on the legitimacy of institutional care began to bear fruit. Hospital populations declined rapidly after 1965. This pattern is clearly shown in Figure 1. A shift in thinking had made community care and treatment, at least in theory, an acceptable alternative to institutionalization. Administrative and structural changes within institutions, including open-door policies, informal admissions, and efforts to prepare patients for early release, as well as the introduction of psychotropic drugs, reinforced the faith in the efficacy of community treatment. The passage of Medicaid and Medicare, moreover, hastened the exodus of aged patients from hospitals to chronic nursing homes. The rapid expansion of third-party reimbursement plans stimulated the use of inpatient and outpatient psychiatric services in general hospitals. Ironically, the reduction of the patient population, no doubt, had the effect of improving the lives of those who remained in public mental hospitals.

Nowhere are the changes in the mental health system during the 1960's more visible than in the aggregate data dealing with patient care episodes. In 1955, there were 1,675,352 patient care episodes; 379,000 (22.6 percent) were treated in outpatient facilities, 818,832 (48.9 percent) in State mental hospitals, and the remainder in other institutions. Of 3,380,8188 episodes in 1968, 52.7 percent were treated in outpatient facilities (of which 8 percent were in community mental health centers, or CMHCs), 23.4 percent in State hospitals, and 23.9 percent in other institutions. To put it another way, in 1955, 77.4 percent of episodes were treated in inpatient facilities and 22.6 percent in outpatient settings; 13 years later the respective figures were 47.3 percent and 52.7 percent. In sum, there was a profound shift in the location of services as well as an increase in the *rate* of episodes. In 1955 there were 1,028 episodes per 100,000; by 1968 this figure had risen substantially to 1,713 (NIMH, 1970, 1980).

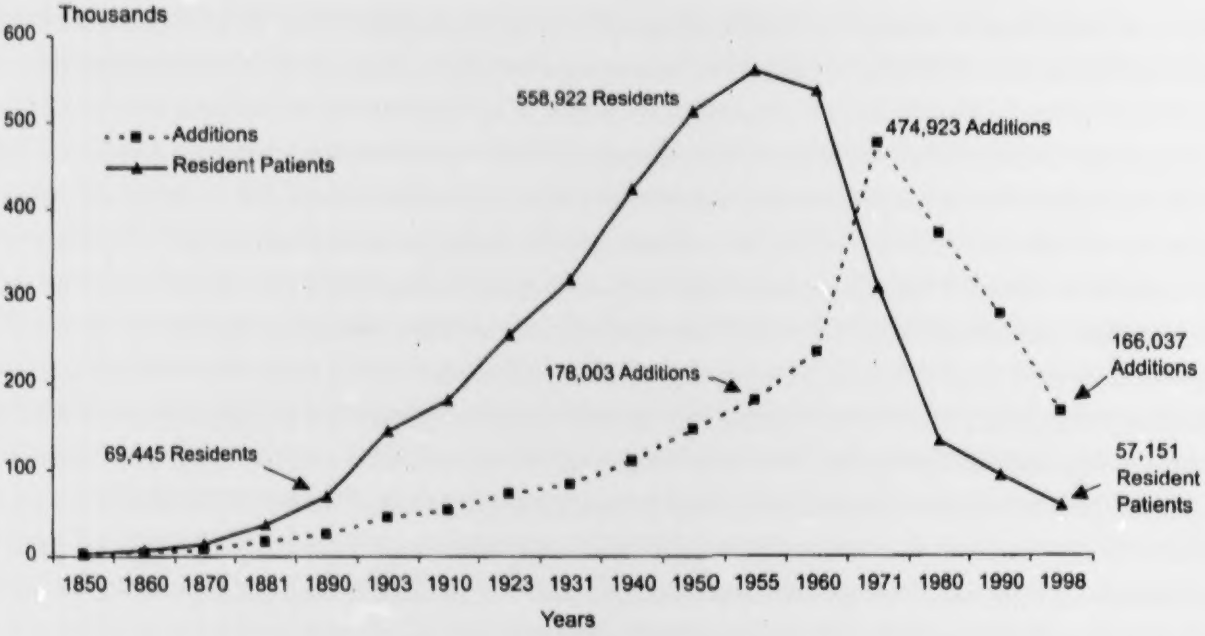

Figure 1. Additions and resident patients in state and county mental hospitals, United States, 1850 to 1998

The change in the location of services, however, did not mean that public mental hospitals were on the road to extinction and that community outpatient centers and clinics were assuming their functions. On the contrary, it is well known that outpatient facilities grew rapidly because they were used by new groups that in the past had no access to the mental health system and who were, for the most part, not persons with long-term care needs. Thus while the rate of inpatient care episodes at public hospitals declined from 502 to 401 per 100,000 between 1955 and 1968, outpatient care episodes leaped from 233 to 901. In absolute terms, inpatient care episodes at public institutions in the same period fell from 818,832 to 791,819, whereas outpatient care episodes increased from 379,000 to 1,778,590 (NIMH, 1970, 1980). These data demonstrate that the growth in outpatient services was not at the expense of inpatient services. Many of the changes in the mental health system, in other words, occurred because of the expansion of services and recruitment of a new clientele rather than the substitution of one service for another.

The dramatic growth of outpatient facilities diminished the relative significance of public mental hospitals, which for more than a century had been central to the mental health system. The number of resident patients fell slowly in the period from 1955 to 1965, and more rapidly thereafter. Yet, at the same time, the number of admissions was increasing. In 1955, 178,003 persons were admitted to State and county mental hospitals. A decade later, the figure was 316,664. The rapid decline in the resident population after 1965 did not alter this pattern; in 1970 there were 384,511 admissions. These figures suggest that an important change in the function of State hospitals had taken place. During the first half of the 20th century, these institutions cared for large numbers of long-term care cases drawn from several categories, including persons with schizophrenia admitted during youth and early maturity and who remained for the rest of their lives, persons with disorders of aging, and persons with sexually transmitted diseases. By the late 1960's, the number of aged and chronic patients began to fall, and mental hospitals then began to provide more short- and intermediate-term care and treatment for persons with severe mental illness (Kramer, 1976).

To be sure, the number of patient care episodes treated in general hospitals (with and without psychiatric units) and Federally funded CMHCs increased, although there were sharp variations from place to place. The available (and imperfect) data, however, indicate that these facilities did not generally treat individuals previously admitted or likely to be admitted to mental hospitals. There were, for example, some striking differences in diagnostic categories. In 1969, State hospitals had a higher proportion of patients with schizophrenic reactions, a group that constituted the core of those with severe mental illness. Nearly 30 percent of their admissions were in this category, while 11 percent were in the organic brain syndrome and 10.2 percent in the depressive categories. General hospital inpatient services, by way of contrast, treated different kinds of patients. More than a third of their admissions suffered from depressive disorders; schizophrenic reactions accounted for 17.2 percent and organic brain syndromes 6.5 percent (Kanno & Scheidemandel, 1974; Kramer, 1976; NIMH, 1972).

The differences between State mental and general hospitals with specialized units become even clearer from length-of-stay data. Stays in general hospitals were far shorter than those in public mental hospitals (Kanno & Scheidemandel, 1974); in 1975 the mean stay was only 11 days and the median 6.7. The pattern in State mental hospitals differed substantially; a significant proportion of patients were institutionalized for long periods. Even though the number of long-term patients at public institutions fell precipitously after 1965 because changes in funding patterns reduced the number of elderly and long-term care patients, State hospitals remained what three investigators termed "the place of last resort" for perhaps 100,000 individuals for whom no alternative facility was available. Thus, in 1969 the mean stay of discharged patients at public hospitals was 421 days; 6 years later the corresponding figure was 270 days. Median length-of-stay data, however, reveals a quite different situation. In 1970, the median length of stay for admissions (excluding deaths) was 41 days; 5 years later this figure had dropped to 25 days. These data suggest that public institutions continued to treat and care for more persons with severe and long-term illnesses than did any other kind of institution. Indeed, in 1969 and 1975 public institutions accounted for 79.4 and 67.2 percent, respectively, of all days of inpatient psychiatric care (Kramer, 1976).

Hailed as the harbingers of a new era, CMHCs failed to live up to their promise. Admittedly, appropriations fell far below expectations because of the budgetary pressures engendered by the Vietnam War. More important, CMHCs served a different population than State hospitals did. Most centers made little effort to provide coordinated aftercare services and continuing assistance to persons with severe and long-term mental illnesses. They preferred to emphasize psychotherapy, an intervention especially adapted to individuals with emotional and personal problems as well as one that appealed to a professional constituency. Even psychiatrists in community settings tended to deal with more affluent persons with neuroses, as compared with persons with long-term mental illnesses.

Changing Federal Policies

During and after the 1970's, the focus of Federal policy shifted dramatically because of a growing perception that substance abuse (particularly drugs and, to a lesser extent, alcohol) represented major threats to the public at large. Beginning in 1968, Congress enacted legislation that sharply altered the role of CMHCs by adding new services for substance abusers, children, and elderly persons. Congress believed that the Community Mental Health Centers Act of 1963 had resolved most of the major problems of persons with mental illness and that greater attention should be paid to other groups in need of mental health services. As the services provided by centers proliferated, the interests of persons with severe and long-term mental illnesses—clearly the group with the most formidable problems—slowly receded into the background.

The inauguration of Richard Nixon in 1969 altered the political environment. Between 1970 and 1972, his Administration worked assiduously to scale back NIMH programs, many of which survived only because of a sympathetic Congress. By 1973, however, the Watergate scandal was preoccupying the attention of the White House, and mental health policy issues receded into the background. Nixon's resignation in the summer of 1974 was welcomed by those concerned with mental health policy issues, if only because he was perceived as an opponent of any significant Federal role in shaping and financing services. In the months preceding and following Nixon's resignation, Congress undertook a reassessment of the CMHC program. The result was the passage of a mental health law in mid-1975 over President Gerald Ford's veto. Yet this legislation—which expanded the role of CMHCs—never addressed the fundamental issue of providing for the basic human and medical needs of persons with severe mental illnesses (Grob, 1994a).

The election of Jimmy Carter to the presidency in 1977 introduced a new element of hope. In one of his first acts, Carter signed an executive order creating the President's Commission on Mental Health to review national needs and make necessary recommendations. Yet, the Commission's final report offered at best a potpourri of diverse and sometimes conflicting recommendations. Eventually, Congress passed the Mental Health Systems Act a month before the 1980 presidential election. Its provisions were complex and, in some respects, contradictory. Nevertheless, the law suggested at the very least the outlines of a national system that would ensure the availability of both care and treatment in community settings (Grob, 1994a).

The Mental Health Systems Act hardly had become law when its provisions became moot. The election of Ronald Reagan to the presidency led to an immediate reversal of policy. Preoccupied with reducing both taxes and Federal expenditures, the new Administration proposed a 25 percent cut in Federal funding. More important, it called for a conversion of Federal mental health programs into a single block grant to the States carrying few restrictions and without policy guidelines. The presidential juggernaut proved irresistible, and in the summer of 1981 the Omnibus Budget Reconciliation Act was signed into law. Among other things, it provided a block grant to States for mental health services and substance abuse. At the same time, it repealed most of the provisions of the Mental Health Systems Act. The new legislation did more than reduce Federal funding for mental health; it reversed nearly three decades of Federal involvement and leadership. In the ensuing decade, the focus of policy and funding shifted back to the States and local communities, thus restoring in part the tradition that had prevailed until World War II. The transfer and decentralization of authority, however, exacerbated existing tensions; Federal support was reduced at precisely the same time that States were confronted with massive social and economic problems that increased their fiscal burdens (Grob, 1994a).

The Paradox of Deinstitutionalization

Disagreements over national mental health policy were but one development that had major repercussions. Equally significant, States during and after the 1970's accelerated the discharge of large numbers of persons with severe and persistent mental illnesses from public mental hospitals. The origins of "deinstitutionalization"—a term that is both imprecise and misleading—are complex. Prior to World War II, responsibility for care and treatment had been centralized in public asylums. Under the policies adopted during and after the 1960's, however, responsibility was diffused among a number of different programs and systems. The failure of CMHCs to assume the burdens previously shouldered by State hospitals, for example, magnified the significance of the medical care and entitlement systems. General hospitals with and without psychiatric wards began to play an increasingly important role in treating persons with mental illnesses. Because such persons tended to be unemployed and, thus, lacked either private resources or health insurance, their psychiatric treatment often was financed by Medicaid. Similarly, responsibility for care (i.e., food, clothing, and shelter) slowly was subsumed under the jurisdiction of Federal entitlement programs. A paradoxical result followed. The fragmentation of what had once been a unified approach to mental illnesses was accompanied by an expansion of resources to enable persons with serious mental illnesses to reside in the community.

During and after the 1960's, deinstitutionalization was indirectly sanctioned by the judiciary when Federal and State courts began to take up longstanding legal issues relating to persons with mental illnesses. The identification of these new legal issues had significant consequences for psychiatrists and persons with mental illnesses. The traditional preoccupation with professional needs was supplemented by a new concern with patient rights. Courts defined a right to treatment in the least restrictive environment; shortened the duration of all forms of commitment and placed restraints on its application; modified the right of psychiatrists to make purely medical judgments about the necessity of commitment; accepted the right of patients to litigate both before and after admission to a mental institution; and defined a right of a patient to refuse treatment under certain circumstances. The emergence of mental health law advocates tended to weaken the authority of both psychiatrists and mental hospitals, and conferred added legitimacy to the belief that protracted hospitalization was somehow counterproductive and that community care and treatment represented a more desirable policy choice (Grob, 1994a).

Judicial decisions, however significant, merely confirmed existing trends by providing a legal sanction for deinstitutionalization. Some knowledgeable figures recognized potential problems and voiced concern. Nevertheless, the pattern of discharging patients from mental hospitals after relatively brief stays accelerated after 1970 because of the expansion of Federal entitlement programs having no direct relationship with mental health policy. States began to take advantage of a series of relatively new Federal initiatives that were designed to provide assistance for a variety of disabled groups and thus facilitate their maintenance in the community.

The elderly were among the first to be affected by new Federal policies. Immediately following the passage of Medicaid in 1965, States began to shift the care of elderly persons with behavioral symptoms from mental hospitals to chronic care nursing facilities. Such a move was hardly the result of altruism or a belief that the interests of aged persons would be better served in such institutions. On the contrary, State officials were predisposed to the use of nursing homes because a large part of the costs were assumed by the Federal government. The quality of care in such facilities (which varied in the extreme) was not an important consideration in transferring patients. Indeed, the relocation of elderly patients from mental hospitals to extended care facilities often was marked by increases in the death rate. Moreover, many nursing homes provided no psychiatric care. When Bruce C. Vladeck published his study of nursing homes in 1980, he selected as his book title *Unloving Care: The Nursing Home Tragedy.*

During the 1960's the population of nursing homes rose from about 470,000 to nearly 928,000, largely as a result of Medicaid. A study by the General Accounting Office (GAO) in 1977 noted that Medicaid was a large purchaser of mental health care, the principal Federal source of funding for care of persons with mental disability and a major factor in deinstitutionalization (GAO, 1977). By 1985, nursing homes had over 600,000 residents diagnosed with mental illnesses; the cost of their care was over $10.5 billion, a large proportion of which was paid for by Medicaid. The massive transfer of large numbers of elderly patients who behaved in abnormal ways was not controversial, if only because such individuals posed no obvious threats to community residents. Designed to provide services for the elderly and indigent, therefore, Medicaid (as well as Medicare) quickly became one of the largest mental health programs in the United States (GAO, 1977; Johnson, 1990; Rice, Kelman, Miller, & Dunmeyer, 1990).

Other Federal programs had an equally profound effect on nonelderly persons with mental illnesses. In 1956, Congress had amended the Social Security Act to enable eligible persons, age 50 and over, to receive disability benefits. The Social Security Disability Insurance (SSDI) program continued to become more inclusive in succeeding years and ultimately covered persons with mental disabilities.

In 1972, the Social Security Act was further amended to provide coverage for individuals who did not qualify for benefits. Under the provisions of Supplemental Security Income for the Aged, the Disabled, and the Blind (more popularly known as SSI), all those whose age or disability made them incapable of holding a job became eligible for income support. This entitlement program was administered and fully funded by the Federal government; its affiliation with Social Security had the added virtue of minimizing the stigmatization often associated with welfare. SSI and SSDI encouraged States to discharge persons with severe and persistent mental illnesses from mental hospitals, since Federal payments would presumably enable them to live in the community. Those who were covered under SSI also became eligible for coverage under Medicaid. In addition, public housing programs and food stamps added to the resources of persons with mental illnesses residing in the community (Johnson, 1990; Public Law 92-603, 1972).

The expansion of Federal entitlement programs hastened the discharge of large numbers of institutionalized patients during and after the 1970's. This trend was reflected in the changing pattern of mental hospital populations. In the decade following 1955, the decline in inpatient populations was modest, falling from 559,000 to 475,000. The decreases after 1965 were dramatic: between 1970 and 1986, the number of inpatient beds in State and county institutions declined from 413,000 to 119,000, and in the 1990's fell well below 100,000. Length-of-stays dropped correspondingly. Yet, State hospitals remained the largest provider of total inpatient days of psychiatric care; their patients were disproportionately drawn from the ranks of the most difficult, troubled, and violence-prone (Grob, 1997).

In theory, the combination of entitlement programs and access to psychiatric services outside of mental hospitals should have fostered greater State financial support for community programs. The presumption was that a successful community policy would eventually permit the consolidation of some mental hospitals and closure of others, thus facilitating the transfer of State funds from institutional to community programs. In practice, however, the State mental hospital proved far more resilient than its critics anticipated. Some had powerful support among community residents and employees who feared the dramatic economic consequences that would accompany closure. A shrinking inpatient census, therefore, sometimes led to rising per capita expenditures, since operating costs were distributed among fewer patients. Equally important, there remained a seemingly irreducible group of individuals who were so disabled that institutional care appeared to be a necessity.

In retrospect, mental health policy changed dramatically after 1965, but not in the manner envisaged by those active in its formulation. After World War II, there was a decided effort to substitute an integrated community system of services for traditional mental hospitals. The system that emerged in the 1970's and 1980's, however, was quite different. First, mental hospitals did not become obsolete even though they lost their central position. They continued to provide both care and treatment for the most severely disabled part of the population. Second, community mental health programs expanded dramatically, and inpatient and outpatient psychiatric services became available in both general hospitals and CMHCs. A significant proportion of their clients, however, represented new populations that did not fall within the traditional categories. Finally, a large part of the burden of supporting persons with severe mental illness in the community fell on a variety of Federal entitlement programs that existed quite apart from the mental health care system. Since the 1970's, therefore, such persons have come under the jurisdiction of two quite distinct systems—entitlements and mental health—that often lacked any formal programmatic or institutional linkages (Grob, 1994a).

Whatever its contradictory and tangled origins, deinstitutionalization had positive consequences for a large part of the Nation's population with severe and persistent mental illnesses. Data from the Vermont Longitudinal Research Project (begun in the mid-1950's) offered some dramatic evidence that individuals with severe mental illness who were provided with a range of comprehensive services could live in the community. The results of this experiment indicated that two-thirds "could be maintained in the community if sufficient transitional facilities and adequate aftercare was provided." Similar longitudinal studies in the United States, Switzerland, and Germany came to similar conclusions. A variety of other mental health service demonstration projects supported by private foundations and Federal agencies (e.g., the Robert Wood Johnson Foundation, NIMH, the Agency for Health Care Research and Quality, and CMHS) have confirmed the effectiveness of a system that provides employment opportunities, supportive housing, social supports, treatment of individuals with both mental illness and substance abuse diagnosis, and the diversion of persons with mental illnesses from jails into integrated treatment facilities. That individuals with severe mental disorders prefer and do better in community settings is clear; access to economic resources (particularly vocational rehabilitation) and empowerment provide a feeling of mastery rather than a sense of dependency (Goldman, 1999; Harding, 1986; Rosenfield, 1992).

The Dilemma of "Young Adult Chronic Patients"

Under the best of circumstances, deinstitutionalization would have been difficult to implement. The multiplication of programs and absence of formal integrated linkages, however, complicated the task of both patients and those responsible for providing care and treatment. Moreover, the decades of the 1970's and 1980's were hardly propitious for the development and elaboration of programs to serve disadvantaged populations such as persons with severe and persistent mental illnesses. The dislocations and tensions engendered by the Vietnam War, an economic system that no longer held out as great a promise of mobility and affluence, and the rise of antigovernment ideologies all combined to create a context that made experimentation and innovation more difficult. The founding of the National Alliance for the Mentally Ill in 1979 helped, in part, to redress the balance. It brought together families of persons with mental illnesses in an advocacy organization that began to play an increasingly important role in the politics of mental health during and after the 1980's.

As a policy, deinstitutionalization was based on the premise that the population found in mental hospitals was relatively homogeneous. The first major wave of discharges came after 1965 and occurred among a group of individuals who had been institutionalized for relatively long periods or else had been admitted later in their lives. This phase was not controversial nor did it create difficulties, since few of these individuals seemed to pose a threat to others.

After 1970, a quite different situation prevailed because of basic demographic trends in the population as a whole and changes in the mental health service system. At the end of World War II, there was a sharp rise in the number of births, which peaked in the 1960's. Between 1946 and 1960, more than 59 million births were recorded. The disproportionately large size of this age cohort meant that the number of persons at risk for developing severe mental disorders was very high. Moreover, younger people tended to be much more mobile than the general population.

At the same time that the cohort born after 1945 was reaching its 20's and 30's, the mental health service system was undergoing fundamental changes. Prior to 1970, persons with severe and persistent mental disorders were generally cared for in State hospitals. If admitted in their youth, they often remained institutionalized for decades, or else were discharged and readmitted. Hence, their care and treatment was centralized within a specific institutional context, and, in general, they were not visible in the community at large. Although persons with long-term care needs were always found in the community, their relatively small numbers posed few difficulties and in general did not arouse public concern.

After 1970, however, a subgroup of persons with mental illnesses—composed largely of young adults—were adversely affected by the changes in the mental health service system. Such persons were rarely confined for extended periods within mental hospitals. Restless and mobile, they were the first generation of psychiatric patients to reach adulthood within the community. Although their disorders were not fundamentally different than their predecessors, they behaved in quite different ways. They tended to emulate the behavior of their age peers who were often hostile toward conventions and authority. The young-adult population with long-term care needs exhibited aggressiveness, volatility, and noncompliance. They generally were diagnosed with schizophrenia, although affective disorders and borderline personality disorders were also present. Above all, they lacked functional and adaptive skills. Complicating the clinical picture were high rates of alcoholism and drug abuse among these patients, which only exacerbated their volatile and noncompliant behavior. Virtually every community experienced the presence of these young adult individuals on their streets, in emergency medical facilities, and in correctional institutions. Recent estimates have suggested that perhaps a quarter to a third of the single adult homeless population have a severe mental disorder. Many have a dual diagnosis of severe mental illness and substance abuse and were often caught up in the criminal justice system (Grob, 1994a).

Deinstitutionalization was largely irrelevant to many of the young patients who were highly visible after 1970. They had little or no experience with prolonged institutionalization, and, hence, had not internalized the behavioral norms of a hospital community. The mobility of such individuals, the absence of a family support system, and programmatic shortcomings complicated their access to such basic necessities as adequate housing and social support networks. The dearth of many basic necessities of life further exacerbated their severe mental disorders. Ironically, at the very time that unified, coordinated, and integrated medical and social services were needed to deal with a new patient population, the policy of deinstitutionalization had created a decentralized system that often lacked any clear focus and diffused responsibility and authority (Grob, 1994b, 1997).

Conclusion

A superficial analysis of the mental health scene in the recent past can easily lead to depressing conclusions. The combined presence of large numbers of young persons with long-term care needs, as well as larger numbers of homeless people undoubtedly reinforced feelings of public apprehension and professional impotence. Indeed, the popular image of mental illnesses and the mental health service system was often shaped by spectacular exposés in the media—visual and printed—that seemed to reveal sharp and perhaps irreconcilable tensions. In the popular images could be seen the conflict between absolutist definitions of freedom and other humanitarian and ethical principles, as well as the concerns that the well-being, if not the very safety, of the community seemed endangered.

The image of deinstitutionalization so often portrayed in the press and on television, nevertheless, represented a gross simplification that ignored a far more complex reality. The popular image of this population using drugs, wandering the streets of virtually every urban area, and resisting treatment and hospitalization was true for only a subgroup of a much larger population of persons with mental illnesses. Many of these persons have made a more or less successful transition to community life as a result of the expansion of Federal disability and entitlement programs (Koyanagi and Goldman, 1991). That major problems within the mental health system persist is indisputable. Mechanic (1991) insists that a variety of different strategies—including the integration of assertive community treatment, approaches that unified diverse sources of funding and directed them toward meeting needs of disabled persons, strong local mental health authorities, and rational reimbursement structures—offered at least the potential for improvement (Mechanic, 1991). Only the future will reveal whether such a potential can become a reality.

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Section 2: Status of Mental Health Statistics at the Millennium

Chapter 3

Decision Support 2000+ A New Information System for Mental Health

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Evolving Need for Information

The need for good information has expanded exponentially in the managed care era. Dramatic changes in the roles and types of stakeholders in the mental health care system are taking place. These changes have created a need to expand and improve information and to provide support for decisions made on a daily basis. *The quality of information will determine the quality of care*: without good data, stakeholders cannot make good decisions and without good decisions, the system cannot continue to operate.

Such information should be available quickly, electronically, and in an easily accessible format. Currently, this situation generally does not prevail in the mental health field because of dramatic under-investment in modern information systems and lack of application of modern information technology to mental health problems.

Such information also should be confidential, protect personal privacy, be available for consumer review and correction, and be used only for medical purposes to improve personal well-being. Currently, this situation generally does not prevail in the mental health field because medical records are fragmented, maintained on paper, transmitted through facsimile machines, sent electronically over the Internet without protection, and available for commercial exploitation.

The mental health field (and, indeed, the human service system as a whole) needs standardized data to manage care effectively. The field also requires measures to evaluate the quality of the care provided, with respect to both practices and outcomes. Clinical and system guidelines exist but are not widely accepted. As a result, they are not used to standardize practice or to provide criteria for judging provider and system performance. Availability of data systems for collecting this information in a uniform and comparable way will enable communication among participants and across systems of care.

Today's technology makes possible a revolution in information: multiple users can participate in what is *virtually a single information system* that will enable them to share data and communicate effectively. If they adhere to established standards for data collection, this virtual system can be used to meet their information needs, whether they are consumers or providers making choices about treatments, payers deciding among health plans, managers allocating financial and human resources, or researchers determining the need for services in a community. Collection of necessary data can be accomplished while protecting the privacy and confidentiality of personal medical records.

To be useful in the current environment, mental health information needs to span a range from population characteristics through the effects of services. The Survey and Analysis Branch within the Center for Mental Health Services (CMHS) is currently supporting work to develop the framework for such a system. Support and buy-in from all major stakeholders in the system is critical to the success of these projects. To this end, CMHS is working with a broad array of expert consultants from major stakeholder groups, such as mental health consumers, family members, the managed behavioral health care industry, individual service providers, payers, researchers, and experts in mental health electronic records and information technology.

Purpose of *Decision Support 2000+*

To respond to the mental health field's lack of standardized data, uniform measures, and an accessible and effective information system, the CMHS project team is developing data standards, minimum data recording requirements, procedures, and an information system for mental health. These activities build on what the field has already accomplished, using resources currently in place and focusing on areas that need further work. *Decision Support 2000+* is being designed to—

- ***Improve Decisions.*** Decisions made by consumers and family members, providers, payers, managers, and researchers will be enhanced by an information system that provides all the data needed quickly, accurately, and efficiently.
- ***Improve Services.*** An information system that makes available to stakeholders reliable data on a community's mental health needs, services, service users, costs, revenues, performance, and outcomes is critical to improving care.
- ***Improve Accountability.*** To be most beneficial, information on accountability needs to be readily available within the framework of continuous quality improvement.
- ***Improve Communications.*** Effective communication within the mental health system and between it and other human service systems is essential for delivering quality care.

A group of experts and stakeholders was convened to guide the development of *Decision Support 2000+* and to address the goals identified above. This group recommended that the information system should be able to—

- span the entire mental health system, from epidemiology to service delivery to outcomes;
- link with information systems in a broad range of agencies, locations, programs, and organizations;
- meet the needs of all relevant groups, including consumers, families, providers, payers, managed care organizations, State mental health agencies, administrators, researchers, policy makers, and advocates;
- make use of modern technology while ensuring privacy and confidentiality of data;
- be flexible enough to incorporate information and assessment tools that measure the cultural competence of services; and
- facilitate clinical and organizational decision-making and enhance the quality of care.

Description of *Decision Support 2000+*

Decision Support 2000+ contains data of four different types: descriptive, prescriptive, evaluative, and corrective. Each type of information has its value for addressing particular types of questions:

Descriptive Information: What are we doing?

Prescriptive Information: What should we be doing?

Evaluative Information: How well are we doing?

Corrective Information: How do we improve?

Figures 1 and 2 illustrate the *Decision Support 2000+* model. Figure 1 summarizes the key information modules (see descriptions below) and shows how they can be linked together and transformed to answer a range of critical stakeholder questions. The key information modules are—

- population, plan enrollment, encounters with service providers, and the financial, organiza-

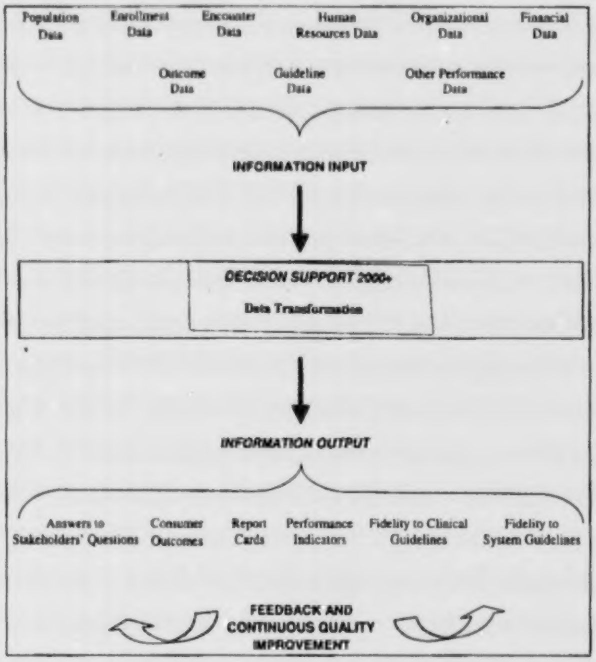
Population Data
Enrollment Data
Encounter Data
Human Resources Data
Organizational Data
Financial Data
Outcome Data
Guideline Data
Other Performance Data
INFORMATION INPUT
DECISION SUPPORT 2000+
Data Transformation
INFORMATION OUTPUT
Answers to Stakeholders' Questions
Consumer Outcomes
Report Cards
Performance Indicators
Fidelity to Clinical Guidelines
Fidelity to System Guidelines
FEEDBACK AND CONTINUOUS QUALITY IMPROVEMENT

Figure 1. Components of *Decision Support 2000+*

tional, and human resource characteristics of clinical and administrative entities within the care system;

- measures that reflect adherence to system and clinical guidelines; and
- results reported through system performance measures, consumer outcome measures, and surveys of consumers, providers, and others.

Figure 2, by contrast, shows how both the mental health care system and *Decision Support 2000+* are linked to the care and information systems of other key groups and human service agencies. The stakeholders in the mental health care system provide data for and receive information from *Decision Support 2000+*. Stakeholder queries can range from questions about plan quality to questions about adherence to practice guidelines.

The information system will record data from various sources that are needed to manage mental health systems effectively. *Population data* will describe demographic characteristics, medical and mental health status and level of functioning, and quality of life of community members. *Enrollment data* will describe demographic, insurance, and baseline health and mental health status of enrollees and their family members. *Encounter data* will characterize all users of services (e.g., health and mental health status, diagnosis, symptoms, functional status), types of services used, and frequency of use. *Financial data* will reflect costs of services, administrative costs, other expenditures, and revenues. *Human resource data* will describe the characteristics of providers of care, support staff, and other personnel. *Organizational data* will reflect information about organizational structure and process.

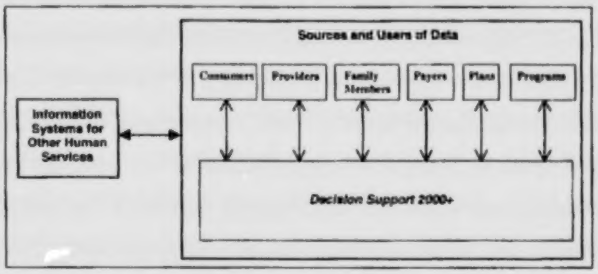
Information Systems for Other Human Services
Sources and Users of Data
Consumers
Providers
Family Members
Payers
Plans
Programs
Decision Support 2000+

Figure 2. *Decision Support 2000+* in context

Clinical guideline data have the potential to serve three primary functions: clinical decision support (selection of the most effective treatments for conditions), treatment process tracking (a detailed and standardized record of clinical interventions), and guideline variance tracking (the congruence between guideline-recommended treatment and actual treatment delivered). While significant progress has been made in establishing the importance of clinical guidelines and their measures, guidelines are currently unavailable for many disorders; there is no consensus on which guidelines are the best; it is recognized that few clinicians have been trained in the use of guidelines; and clinical guidelines software has only recently become available. Implementation of measures for treatment process and guideline variance tracking systems awaits a standard terminology of treatments with associated definitions and codes that can be integrated into routinely used software. Clinical decision support, in turn, depends upon building interfaces with treatment process tracking and consumer characteristics. As we develop this component of *Decision Support 2000+*, we will involve end-users in the development of guidelines, taxonomies, measures, and software so that they are meaningful, reputable, and user-friendly.

Even though *system guideline data* are essential for improving the quality of care and efficiency of operations, they are only in the earliest stages of

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development. They specify measures with respect to infrastructure, executive, and management functions; service components directly operated; and service functions outside of mental health that support clinical programs. Prototypical system guidelines and measures exist in the National Alliance for the Mentally Ill's recently published manual on the Program for Assertive Community Treatment (PACT) (Allness and Knoedler, 1998); in operational manuals prescribing organizational practices (accreditation, credentialing, personnel and financial management, buildings maintenance) and clinical interventions (involuntary commitment, seclusion and restraint); and in the quality improvement tools used by some State mental health agencies for assessing provider and organizational performance. Through the work of the CMHS project team, the area of system guidelines is being defined and clarified for the first time. As minimum data sets are developed, we also will clarify the measurement of system guidelines.

Performance indicator, report card, and consumer outcome data are critical for the accountability, quality improvement, and management of mental health systems. Although the field lacks uniform sets of performance indicators and outcome measures, there is an emerging consensus on the critical components for each, and steady progress toward standardization. Several initiatives are under way to standardize measures and definitions across systems; to develop methodological and implementation guidelines; and to analyze, interpret, and present results in comparable ways.

Key Features of *Decision Support 2000+*

Decision Support 2000+ has several hallmark features that deserve mention. The first is protection of privacy and confidentiality of personal medical records. The second is evolution of field-wide standards for data recording. The third is reliance upon existing information whenever possible in order to reduce the cost of implementing the new system. The fourth is the linkage of data from different sources using Internet-based query technology. Each of these features is discussed below.

Protecting Privacy and Confidentiality. *Decision Support 2000+* is being designed to protect privacy and confidentiality of personal medical records using modern information technology. An overarching concern in conceptualizing this new system was an awareness of the need to specifically address these issues throughout the development and implementation process. In preparing the requirements analysis for *Decision Support 2000+* (Minden et al., 2000), a document was commissioned on the issue of privacy from the consumer point of view. This document is available as part of the requirements analysis on *www.mhsip.org*.

Privacy and confidentiality are of concern to most people. This concern becomes magnified when considering medical records and particularly acute when considering mental health medical records. Stigma, loss of control, exploitation, discrimination, and potential negative consequences all combine to exacerbate these concerns. Such considerations have provided strong motivation for efforts to pass a health care bill of rights empowering the consumer community to gain access to medical records and correct errors in them, and bringing forces together to promote ways that human rights can be preserved and enhanced through better privacy and confidentiality protections.

Any effort to address privacy and confidentiality must start with human values and ethics. In mental health, human rights and dignity are basic values. Hence, these values must provide a foundation for any work undertaken in this area. In recognition of this, CMHS has supported the Workgroup for the Computerization of Behavioral Health and Human Services Records which has designed a virtual medical record for behavioral health care in which the key to the medical record is controlled by the consumer (The Workgroup, 1998). This proposed virtual record is also based upon technology that makes it feasible to protect privacy and to control confidentiality. *Decision Support 2000+* will incorporate the fundamental concepts elaborated by the Workgroup.

The U.S. Department of Health and Human Services has recently issued Federal regulations to protect privacy and confidentiality of medical records. A need exists to monitor developments in these regulations with respect to their potential impact on behavioral health care in general, and mental health care in particular. Thus, the regulations ultimately released by the Department will provide another element of the foundation for *Decision Support 2000+*.

Establishing Standards. *Decision Support 2000+* recommends standards for data recording—including minimum data sets, measures and instruments, and procedures for collecting and analyzing data—that permit information reporting at the person, plan, local, State, and national levels. It builds on the work of MHSIP in developing standards for mental health. In the late 1980's, MHSIP created a Task Force to consider existing data standards and recommend revisions. In its 1989 report, Data Standards for Mental Health Decision Support Systems (commonly known as FN–10), the Task Force presented minimum data sets for patient/client data; event/encounter data; human resources data; financial data; and organization data (Leginski et al., 1989); subsequently, recommendations were made in regard to data elements relevant to children (MHSIP, 1992). Owing to the quality of MHSIP's work, all States now have voluntarily adopted many of these standards. A MHSIP workgroup began the process of updating and refining FN–10 (MHSIP, 1997); this work is being continued through development of *Decision Support 2000+* and elaboration of minimum data sets for each of its components.

Using Existing Data. *Decision Support 2000+* makes use of existing information technology and data collection activities, and allows users to bring their current practices closer to the ideal without major overhauls and massive investments. It would obviously be impossible—*de novo*—to build, implement, and finance *Decision Support 2000+*. Most components of the system already exist in one form or another. The Federal and some State governments collect population-level data; managed behavioral health care organizations and providers collect enrollment, encounter, and outcome data, use financial and human resource data, and report on performance indicators; and measures are currently being developed for clinical and system guidelines because of the rapid evolution of this field. Certainly, we need to expand and standardize these data collection efforts, but we must not minimize how much exists. The issue is one of improving what we have and reaching consensus on how to do so, not on totally rebuilding.

The same is true for information systems. Clearly, problems exist with incompatibility in hardware and software—systems that cannot talk to one another cannot share information. But the Internet is an untapped resource and advances in data warehouse and object-oriented technologies are enabling us to overcome local differences. Other technical issues, of course, must be resolved: we need unique identifiers before we can link data on persons, programs, or plans from different databases; we need dependable ways to ensure privacy and confidentiality; and we need to be able to collect comparable information in an efficient and affordable way. Again, the issue is one of improvement and consensus, not starting over.

Linking Data. Part of the enormous potential of *Decision Support 2000+* lies in its capacity to link data from different sources, both within the mental health system and between mental health and other service systems. By drawing from several different data sets through an Internet-based query system, it is possible to answer key questions ranging from the outcome of a single individual's treatment to projections of service needs and financing requirements for entire populations.

By linking data sets virtually, information about persons can be used to improve the quality of care and to evaluate plans and programs. For example, quality of care could be greatly enhanced through the implementation of a virtual integrated patient record spanning the mental health, health, and human services delivery systems (The Workgroup, 1998). Linking enrollment and encounter data aggregated for all persons served by a plan can be used to show whether standards within a contract have been met, such as requirements to provide mental health services to certain percentages and categories of a State's population. Similarly, linking data from consumer satisfaction surveys and other performance measures with aggregated enrollment and encounter data can show the relationship between such factors as satisfaction, availability of specialists, denials of services, and rates of plan enrollment and disenrollment.

Linking data virtually will meet many needs in mental health, including:

- *The need to coordinate care more efficiently and effectively.* A primary barrier to effective and efficient delivery of mental health and human services is the lack of a coordinated communication system that would allow for the sharing of timely, accurate, and appropriate information among all the agencies and service systems involved in care.

- *The need to meet reporting requirements.* Most mental health organizations are accountable to public or private payers and are required to report routinely. Exchange of core data sets, agreement on data exchange protocols, and use of Web-based Internet and intranet applications would increase the efficiency and cost-effectiveness of data collection and reporting.

- *The need for research.* Mental health phenomena at both the personal and the service levels are enormously complex. Our ability to understand current circumstances and predict future trends depends on being able to look at how the many factors affect outcomes and performance; this, in turn, depends on being able to link data.

Many challenges exist to linking the components of an information system and linking that system to others. These challenges include creation of privacy-protected unique client and provider identifiers, linking structurally different databases, and collecting and reporting real-time data. When linking data sets, it is critical that data elements and coding be clearly specified to avoid misunderstanding and unwanted variation in coding items. Data collection procedures and databases that serve multiple purposes, such as reimbursement and quality measurement, are more likely to be adopted by users than more limited ones; but they also increase the need for instruments that are straightforward and transparent, and that minimize additional staff training and development of training materials and documentation.

Status and Next Steps

With guidance from a Technical Expert Workgroup, the CMHS project team has completed the requirements analysis for *Decision Support 2000+*. For each component, this analysis describes the field's achievements and remaining work, in terms of the degree of consensus that exists on *domains* (issues, categories, or topics of interest), *indicators* (measurable activities, events, characteristics, or items that represent a domain), and *measures* (the instruments used to assess, evaluate, and reflect an indicator); whether the measures have been *field tested* and/or *implemented*; and whether the component is fully *ready for inclusion* in the information system. The components are at different levels of development. For the enrollment and encounter components, for example, there is fairly broad consensus on what to include within the information system, but problems such as specifying unique identifiers remain unresolved. For other components, particularly population, financial, and guideline data, much work remains to be done.

As noted earlier, the complete requirements analysis is posted on the MHSIP website (*www.mhsip.org*) for broad review and comment by the field. For those who do not have time to review the entire requirements analysis, brief summaries for each component are available on the website.

Currently, no typology is available for organizational and financial arrangements under managed behavioral health care. The team will address this critical gap in our knowledge base and will assess the extent to which the requirements analysis fits each of the major arrangements identified within the typology. This analysis will ensure that *Decision Support 2000+*, as it is refined, is appropriate for and relevant to the needs of evolving organizational and financial arrangements.

Once the typology is available, the project team will move on to the next phase. Over the next two years, groups of experts will be convened to address outstanding issues such as creating unique identifiers, selecting key performance indicators, and recommending uniform outcome measures. They will also develop core minimum data sets for recommendation to the field. While users should collect any data that meet their particular needs, widespread use of the minimum data sets will provide the field with uniform and comparable data to facilitate communication and decisionmaking.

Conclusion

Decision Support 2000+ is an integrated, public-health-oriented information system that is fully congruent with the current and future information needs of the mental health field. Implementation of this information system will facilitate the availability of comparable data to the field for decision support for planning, service design, clinical feedback, and evaluation. Widespread use of the information system will be of tremendous benefit to the entire mental health community.

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Chapter 4

Information Needs: A Consumer and Family Perspective

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Introduction

The time has come for the field to examine and take action to develop a high-caliber information system. For too long, consumers and families have had extremely limited information on which to base their choices of health plans, services, and providers. While the field has made great strides in the development of innovative services and practices, our ability to collect and evaluate data uniformly is far behind the curve.

If we do not possess the necessary data to determine the quality of care, we cannot make health care systems accountable. If we do not give consumers and families the tools to make informed decisions about their own health care, we put them at risk for failure. We must develop and implement a new mental health information system if we are to provide consumers and families with the data and tools they need and if we, as a field, are to meet our potential for excellence.

Will the 21st century bring consumers and families closer to the goal of choosing a health care plan based on uniform data and information? Is the field any closer to developing a type of *Consumer Reports* for health care plans, effectively providing constituency groups with the means to make meaningful choices in determining the "best" health plan that closely meets the preferences of consumers and their families? What are some of the information needs consumers and families would like included in a new information system?

Will the mental health and health care fields be capable of measuring quality, outcomes, and performance across health plans? How can health plans compete on an even playing field when we currently have no standardized way of measuring success? Will we be able to convey this information in a way that is meaningful and relevant to consumers and families?

What are the benefits and challenges of a uniform data and information system for consumers and family members? What unique considerations should be addressed in the development of such a system?

What Are the Information Needs of Consumers and Families?

Consumers and families are primary stakeholders in today's mental health field. Although data and information systems traditionally have been geared to policymakers, administrators, and mental health agencies, consumers and families have recently become key customers for information in order to select health plans, make individual choices when determining needs and preferences for care, and advocate for needed services. The need for person- and system-level data has become more urgent as managed behavioral health care becomes the primary vehicle for monitoring and administering mental health services in many States and local communities.

Data and information requirements under managed behavioral health care often are predicated on the needs of the payer. The extent to which these data are consistent with consumer and family demands for information is not completely clear. Even though consumers and families are involved in determining performance indicators and outcome measures for a system of care, the data that are collected generally are not based on customer needs, but on fiscal and political concerns. Although information needs of consumers and families vary according to geography, funding, availability of services, and the maturity of the mental health care system, the following list presents some of the common basic information needs of consumers and families:

- types of services offered and excluded;
- costs of services (copayments, benefit limits);
- types and numbers of providers and specialists;

- accreditation status;
- provider and program credentialling;
- travel time to facilities and providers;
- physical accessibility of facilities;
- quality assurance reports;
- complaints and grievances filed against providers, plans, managed care organizations (MCOs);
- sanctions;
- reinvestment history;
- utilization review procedures; and
- unduplicated count of clients served, services provided.

What Are the Benefits of *Decision Support 2000+* to Consumers and Families?

With the large-scale changes in the organization of behavioral health care during the past decade, consumers and families would benefit from additional information on plan performance and organization. Key topics of great interest range from access, through appeals, to outcomes.

In addressing these topics, *Decision Support 2000+* (Minden et al., 2000) would be of great benefit to consumers and families through:

- reducing fragmentation;
- promoting accountability;
- raising standards of excellence for care;
- raising standards of excellence for information;
- promoting visionary policy development;
- reinforcing the link between service delivery and quality of care;
- promoting integrated services; and
- promoting competition and the use of consumer report cards.

Reducing Fragmentation

Too often, consumer and family advocacy groups have complained about fragmentation within and across mental health, substance abuse, and health care systems. As a result, consumers often receive services that are not based on and do not support a continuum of care, and do not attend to their long-term care needs. One example is a consumer who uses psychiatric services but who cannot obtain needed substance abuse services to address a drug problem.

Fragmentation also occurs from a data and policy perspective. If the field is unable to collect uniform data on the service needs of people with mental illness and on the costs and outcomes of providing these services within and across care systems, policy makers cannot make informed decisions about mental health policy, and administrators cannot decide about resource allocation and planning. This lack of integrated and cross-system information to support integrated services and a continuum of care has a direct and lasting negative impact on the rehabilitation, recovery, and clinical goals of consumers and families.

Managed care has enabled some States to track service use more effectively by population, region, and type of service offered. In some instances, quality measures are being used to ensure accountability at the local level. Such data can be used to advocate, plan for, and support the development of additional services and to earmark limited resources for services most preferred by consumers and families. The more comprehensive the data made available from an information system, the better they will reflect the full range of family and consumer service needs and preferences.

One example of quality measures to ensure local accountability is the use of data to foster development of housing in a community where homelessness has become epidemic. Data on persons who are homeless and mentally disabled can be used to examine the linkage between the outcomes associated with improved housing and receipt of mental health services. Such data then can be used by advocacy groups to convince public officials to invest resources to design and develop housing options that meet the special needs of people with mental illness who are homeless.

Fragmentation is a problem not only for the service system—it affects information systems as well. At present, information systems are fraught with problems that arise from disparate methods of data collection and noncomparable ways of measuring quality. Currently, there are many initiatives under way in the field that are designed to identify sets of performance indicators and outcome measures. While the number of such projects is impressive, have they served to perpetuate a segmented system for identifying needed information? Still, there are several efforts in States and at the Federal level to bring this work together, such as the summit on common performance measures that was held by the Survey and Analysis Branch of the Center for Mental Heath Services, SAMHSA.

Promoting Accountability

All State systems generally are guided by State planning processes, as required by the State Mental Health Planning Act (P.L. 106–310). Within the framework of such plans, programs and services are outlined and priorities for funding received through the Community Mental Health Services Block Grant are identified. States now are required to track progress on implementing these priorities through the use of performance indicators. With performance indicators, Federal officials can more effectively monitor States' use of resources, and consumers and families can be positioned better to ensure that services proposed by States are implemented. Performance indicator data also can show how well the services meet consumer and family needs. Block grant funding also provides more flexibility to develop unique services that are tailored to local consumer and family needs. Because of its flexibility, the information system can include performance indicators for programs common to many States as well as performance indicators for programs unique to a particular State.

Raising Standards of Excellence for Care

There are currently no viable mechanisms to compare data on care and outcomes across State lines. In this respect, consumers, families, and advocacy organizations are hard-pressed to use data to compare managed care plans in regard to quality of care on a regional or national basis. Consumers and families who relocate may wish to base a move on the quality of care in another community. In addition, some consumers may find that it is more feasible to receive care in a neighboring State. Mobility is a reality for many consumers and families in today's society; care systems should adapt accordingly to ensure that services are easily available and that information about accessing services is provided.

In order to raise the standards of excellence for care, we must be able to measure the quality of care provided by different plans and providers and compare the results. Many plans shift their priorities for measuring quality of care over short periods, often as a result of changes in the payers' priorities. If comparisons across plans are to remain meaningful in the face of such changes, standardized measures must be available for a wide range of quality indicators.

From a policy perspective, consumers and families demand excellence, and they have not been convinced that a comprehensive approach is available to ensure that the highest quality and most cost-effective services are delivered. This fundamental "missing piece" of the system has promoted dependency on what *exists* rather than on what we should *expect*. If we have little or no information about the highest level of quality, we are not promoting quality of care—rather, we are promoting the status quo.

Raising Standards of Excellence for Information

Decision Support 2000+ undoubtedly will raise the bar for excellence for information across the field. Right now, data requirements tend to vary from State to State and, at best, are minimal requirements generated by public payers, regulators, and managed care plans. The requirements vary in their appropriateness and adequacy. As a result, consumer and family efforts to ensure that appropriate services are delivered and that information about such services is accessible and understandable are compromised. Clearly, the data and information industry will have to retool and adapt to the demands of these primary customers.

Most mental health care systems are not able to address all the service needs of every person in a given community. In spite of these realities, consumers and families continue to advocate so that services are provided to those in need. A State-based planning process is one avenue where consumers and families have an impact in identifying unmet needs and effecting change in a State's policy for provision of care. Indeed, information is critical at all phases of the planning process. Advocates must have accurate counts of the number of people with particular needs in the communities to show where changes in provision of care must be made. After changes are instituted, advocates need the same kinds of data to determine whether the changes actually met the community's needs.

Advocacy to expand services to populations in need also can lay the groundwork for expanding prevention and early intervention services. Although policymakers and administrators do not universally embrace prevention, data show that these services offset more expensive treatment (Goldston, 1998). Consumer and family advocacy organizations can be more effective at obtaining resources for prevention and need-based services if they have access to such information. Research that demonstrates cost offsets in a particular community is especially useful.

Promoting Visionary Policy Development

Information uniformity can enhance policy development and increase support for needed services and improved systems of care. Health care policy remains close to home—with individual State legislatures embroiled in the health care policy debate. The lessons we have garnered from State experiences now lay the framework for national action; uniform information will be essential to implementation.

Consumers and families are desperately seeking a common goal of improved outcomes, availability of and access to needed services, and hope for recovery. Consumer and family organizations have become the change agents in many States, pushing for parity and services. The paucity of services and the limited number of providers committed to serving people with severe mental illness, persons who are homeless, or individuals with mental illnesses who are incarcerated have led to problematic and controversial issues such as involuntary outpatient commitment.

A strong advocacy movement must have access to data to press for change. Legislators are often the most impressed when advocacy organizations have a command of information to make a clear case for additional services or to argue for the closure of State-run institutions or programs. Without adequate and accurate data, such efforts to improve service systems is for naught. Even worse, advocacy efforts can have unintended consequences, such as reduction of a mental health budget or allocation of resources to other departments. State mental health administrators cannot make appropriate changes in response to advocates if data are outdated or incomplete.

Current estimates of the number of uninsured Americans have fueled the debate over health care reform. Clear, simple numbers (data), such as these, help keep this issue on the front page of most newspapers and at the top of the agenda of the health care advocacy community.

In the mental health field, shaping policy has become reactive rather than careful and strategic. This trend is exemplified by the resurgence of involuntary outpatient commitment proposals as a means to address the public's call for accountability following high-profile incidents of violence and tragic episodes involving people with mental illness. While a uniform information system is not a panacea, it will provide the field with the information it needs to think about the implications of short-term policy goals and plan more effectively for the future.

Reinforcing the Link Between Service Delivery and Quality of Care

Decision Support 2000+ finally may bring us closer to understanding the important link between service delivery and quality of care. These two areas have often been treated as separate colonies, with no direct link or only a remote relationship.

Treatment guidelines, for example, are pivotal to determining what type of and for what duration clinical services should be provided to a consumer. A system for assessing quality not only must measure the clinical intervention provided, but also be able to measure whether the provider actually adhered to a guideline and whether application of the guideline resulted in improved outcomes for the consumer. Fidelity measures help us better understand what services consumers are actually receiving.

If we ask consumers in a satisfaction survey how pleased they are with the services they received, but fail to ask whether other services are needed to meet their goals for recovery, then we are not measuring quality. By comparing the treatments provided with the guidelines, we can see what is missing that prevents recovery from being achieved. Guidelines are most useful, however, when they address all aspects of a person's functioning. Medication algorithms, for example, can tell us about newer and more effective psychiatric medications; but algorithms alone cannot tell us how psychosocial interventions should play a role in medication compliance or in improving level of functioning.

Grievance and appeal data also play critical roles in determining the effectiveness of service delivery approaches and quality of care. This information has an important impact on a consumer or family's decision about services and plans, but behavioral health care organizations tend not to make such data available.

Promoting Integrated Services and Integrated Information Systems

Consumers and families have served as important stakeholders in the design of innovative services and the articulation of quality standards. These groups clearly see the value of linkages that need to be made across disciplines and systems.

Uniform data and linkages across information systems support integrated systems of care; they also support the changes needed to bring such systems about. For example, accurate data on supportive housing will facilitate a consumer's reentry to the community from an institutional setting. In this regard, the mark of an excellent provider will be the extent to which he or she advocates for improved information linkages along with advocacy for integrated care.

Providers' dedication to the concept of creating and supporting information ultimately will improve the quality of life among consumers. Likewise, the ability of consumer and family organizations to access such data will assist advocates in building additional community supports and other services.

Promoting Competition and the Use of Consumer Report Cards

A well-functioning information system will clear the way for more broadly based competition in the industry to provide a higher grade of services so that quality is at least equal to price as a determining factor. Too often, contracts are awarded solely based on price and not on standards for quality. While cost is an important issue in today's health care marketplace, it is not the overriding issue for consumers and families.

In the instances where cost is placed high on the decisionmaking tree, the market loses the ability to allow consumers to drive the system. Consumers cannot choose among plans when the payer limits competition and bases competition largely on cost. In this respect, consumer choice is nonexistent. Choice among plans selected only on the basis of the lowest price is not choice. Quality competition needs to be included with cost competition; uniform and comparable information on performance indicators and consumer outcomes will facilitate this.

The field has embraced the concept of consumer report cards. Although they are not yet widely used, research and development in this area has gained momentum. Ideally, report cards will serve as an incentive for plans to show improvement over time and in domains such as consumer satisfaction with services; provider satisfaction; costs to consumers and copayments; availability of specialists; factors of choice; complaint and grievance resolutions; and availability and accessibility of psychiatric medications. A "smart" consumer then will be able to make an informed choice among plans that goes well beyond cost considerations.

What Are the Challenges of a Uniform Data and Information System to Consumers and Families?

Some of the challenges consumers and families may face with the development of *Decision Support 2000+* include guaranteeing informed consent, regulating access to medical records, expanding choice, and ensuring valid interpretation and reporting. As with all things, these concerns should not be obstacles to developing the system, but rather challenges that drive creative problem solving. Any major reform will come with technological, training, and startup difficulties. Change can take place only when plenty of mistakes have been made. An effective response by consumers and families to these challenges will form the basis for a well-designed and functional system.

Weakened Informed Consent

Informed consent is the basis for consumer participation in any research protocol, service, or innovative therapy. Unfortunately, this often is the only time consumers have a legitimate voice in their treatment. Consumers have a fundamental right to make informed choices about the services they may use in the beginning and over the course of their treatment. In addition, consumers may seek more control over their treatment at critical junctures, such as at a time when crisis occurs or in decisions pertaining to the selection of a specialist (e.g., trauma counselor). Consumers also have a right to know about and consent to data about them being collected, researched, and reported.

Clearly, an accessible and multifaceted information system presents challenges to ensure that informed consent is obtained, adhered to, and appropriately administered. As we develop a uniform method for data collection and analysis, issues of consent must be addressed along with related issues of privacy and confidentiality. It has been difficult to develop a unique identifier that will allow access to information about a person and still ensure privacy and protect confidentiality. Restricting access to only those persons who need the information within a provider agency or MCO has been effective at stemming the flow of confidential information.

Aside from the obvious implications for consumers and families, there are many issues associated with provider performance and adherence to standards for informed consent procedures. Policies and procedures need to be developed along with standardized and mandatory training for providers who regularly encounter these issues. Clinical training must also emphasize the importance of informed consent so that the next generation of providers will be adequately prepared.

Ability to Access Medical Records

Consumers and their families today face numerous challenges in accessing medical records. Consumers and families need their medical records to monitor ongoing treatment or when seeking redress from an institution that has allegedly been abusive. Specialized advocacy organizations, such as the protection and advocacy agencies that are charged with investigating incidents of abuse or neglect, must have ready access to medical records.

Furthermore, ease of access to records and information is important to many consumers, as well as to ensure accuracy. It is time consuming and frustrating to repeat lengthy medical and psychiatric histories; with adequate privacy protections, histories could be readily available to whomever consumers choose to share them. While there has been a focus on the collection and analysis of aggregate data, there must be the ability to maintain notes and other data in a format that can be accessed by the consumer or family.

The extent to which consumers and families can access medical records in this developing information technology environment is unclear. The system should be relatively straightforward and user-friendly—not only for researchers, providers, and managers, but also for consumers and families with little or no experience with data, computers, or other technologies.

Expanded Choices for Consumers and Families

The key to developing and sustaining consumer choice in any system is to provide the vehicle for choices to be made. The information system itself is one such "vehicle"; within it, other "vehicles" are report cards and consumer outcome measures. Still others are clinical guidelines for treating depression, schizophrenia or other disorders; system guidelines for assertive community treatment; and flow charts describing models for disease management.

Not only must all this information be reliable, but it also must be presented in ways that will be understood by consumers and families if they are to use it to make choices about plans, providers, programs, and overall quality. Realistically, the information system cannot meet every need; but it must, at a minimum, be able to translate complex data into practical and usable information for consumers and families to understand and make choices about key aspects of their care.

Consumer and family advocacy organizations also will demand information on the progress and implementation of the information system. They will want to be assured that the domains that are most critical for their organizations are included in the information system. They expect to continue to be involved in the planning, development, and implementation processes so that their information needs are met and so that they can help monitor the system.

Data Interpretation and Reporting

An important step in implementing the information system prototype will be to identify stakeholders to interpret data and draw policy and research conclusions. From a theoretical standpoint, the ideal model will include consumers, families, and advocacy organizations, among others. Such a coalition is an essential ingredient in any decision-support system.

Consumers and families are critical to successful and meaningful interpretation of information. They are the primary audience—and, as such, have a unique ability to bring data to the attention of policymakers, legislators, and others concerned with systems improvement. They can communicate easily in lay terms and explain the implications of information to their constituents and to the public.

Experts in the field can capitalize on these special skills and know-how by including consumers and families in activities involving analysis and interpretation of data. Consumers and families can help make sense of data by using their own experiences to explicate a finding. A consumer who has been homeless, for example, might be particularly helpful in trying to understand and explain why homeless persons do not access traditional services. A consumer may understand the system's intricacies that are often so elusive to analysts who do not use services. Family representatives know firsthand the problems involved in obtaining services.

Consumer and family organizations have become more familiar and respectful of the need to collect and analyze data for improved information. Their expertise and direct interest in system improvement makes them both noteworthy and essential participants in the process to understand and shape policy through the use of data and information.

All efforts to interpret, report, and analyze data must ensure that the information is accessible to consumers of all levels of education, all cultures, all languages, and all levels of capacity for understanding. In addition, information should be available in alternative formats and via computer as appropriate.

Conclusion: Prevent the Loss of Individuality

The act of establishing a new information system presents us with the chance to think in "big picture mode." There likely will be broad and much-needed policy advances as a result of *Decision Support 2000+*. In many respects, this project presents the field with a unique opportunity to reach beyond our current capabilities to a future bright with change and improvement. Clearly, this project has far-reaching possibilities.

No matter how far we reach, however, we cannot forget the people who will be affected by this major paradigm shift. Consumers' and families' abilities to shape treatment plans, appeal or file grievances, choose providers, or refuse treatment must not be affected adversely by the development of an information system. Consumers' and families' relationships with providers in no way should be diminished by the implementation of such a system. With the promise of improved information comes numerous opportunities for the field. We must be vigilant in our efforts to ensure that such advances will not prevent consumers and families from reaching their goals for treatment and recovery.

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Chapter 5

Psychiatric Epidemiology: Recent Advances and Future Directions

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Epidemiology is a public health discipline concerned with understanding and controlling disease epidemics. This is done by investigating the associations among variations in exposure to disease-causing agents, host resistance to disease-causing agents, and resistance resources in the environments of exposed individuals (Susser, 1973). Investigations of these associations are usually carried out initially by examining naturalistic variation. The typical steps are that a disease first is identified as a major public health problem because of the number of cases, the severity of the disease, the risk of its spreading to others, and the public cost of treating or controlling it. Descriptive information then is collected, often retrospectively from known cases or in a retrospective case-control design. Hypotheses based on the analysis of these data then are tested provisionally in naturalistic, quasi-experimental situations with matching or statistical controls used to approximate the conditions of an experiment. When the hypotheses stand up to these preliminary tests, they are evaluated in interventions aimed at preventing the onset or altering the course of the disorders.

Observational methods provide clues not only about how to intervene, but also about when and where to intervene to prevent or control disease. For example, changes in policies about when and where to intervene to prevent the progression of early-onset mental health problems (Burns, Hoagwood, & Mrazek, 1999) began with the observations that most mental disorders have very early ages of onset and that most children and adolescents who receive mental health care get it in the schools, not from primary medical or specialty mental health care providers (Burns et al., 1995).

Descriptive Psychiatric Epidemiology

Child and Adolescent Community Epidemiologic Surveys

The modern epidemiology of child psychiatric disorders began to evolve in the 1950's with studies focusing on the prevalence of "maladjustment" or "disturbance." Not surprisingly, these early studies produced widely variable prevalence estimates (Gould, Wunsch-Hitzig, & Dohrenwend, 1981). The *DSM–II* (American Psychiatric Association, 1968) system, in use at that time, had only two categories of disorder specific to childhood. Only with the *DSM–III* (American Psychiatric Association, 1987) did a detailed taxonomy of child psychopathology for psychiatric use begin to emerge.

Descriptive epidemiology of childhood disorders presents challenges over and above those of psychiatric epidemiology in adulthood. First, developmental change in the age range 0–18 is so profound that the taxonomy of disorders needed a great deal of work. For some age groups, notably infants and 3- to 6-year-olds, much of the work remains to be done. At the other end of childhood, more work is still needed on the transition to adulthood. For example, little is known about the developmental transition from conduct disorder in the adolescent years to antisocial personality disorder in adulthood. However, child psychiatric epidemiologists have the enormous advantage of nearly a century of existing careful scientific work in developmental psychology that provides basic descriptive data on normal and abnormal developmental pathways and processes (Cairns, 1983). Work of this sort is largely unavailable to researchers in adult psychiatric epidemiology.

A second challenge for child psychiatric epidemiology is whom to ask and whom to believe. As with some adults with mental disorders, young children may not have the words or concepts to express the symptoms they endure, or their judgment of their own behavior may not be reliable. For example, children with hyperactivity disorder are poor judges of their own hyperactivity (Costello, Edelbrock, Dulcan, Kalas, & Klaric, 1984). Consequently, additional information from parents, teachers, and peers often is needed to accurately evaluate these children. The vexing questions of which informants to query and how to reconcile discrepant reports are sources of considerable controversy in child psychiatric epidemiology. Most child researchers have adopted the clinical approach of accepting a symptom as present if any informant endorses it, but new mathematical models are being developed to improve the process of aggregating multi-informant data (Horton, Laird, & Zahner, 1999).

Adult Community Epidemiologic Surveys

Starting with the Epidemiologic Catchment Area (ECA) study in the United States (Robins & Regier, 1991), descriptive psychiatric epidemiology has experienced unprecedented growth during the past two decades. An important innovation of the ECA was the use of a fully structured research diagnostic interview known as the Diagnostic Interview Schedule (DIS) (Robins, Helzer, Croghan, & Ratcliff, 1981). Methodological studies demonstrated that the DIS yields reliable and valid diagnoses (Helzer et al., 1985), a very important result in promoting the ECA-DIS methodology in subsequent general population surveys. This result also led to replication surveys based on the ECA in numerous other countries throughout the world.

Beginning in the mid-1980's, the World Health Organization (WHO), in collaboration with the U.S. Alcohol, Drug Abuse, and Mental Health Administration, expanded the ECA-DIS methodology to include International Statistical Classification of Diseases (ICD) criteria for research and to produce versions of the instrument in many different languages. The resulting instrument, the Composite International Diagnostic Interview (CIDI) (WHO, 1990), first became available in 1990. WHO technical support led to an unprecedented number of major epidemiologic surveys using the CIDI in countries as diverse as Brazil (Andrade, de Lólio, Gentil, Laurenti, & Werebe, 1996), Canada (Offord et al., 1994), Germany (Wittchen, Essau, von Zerssen, Krieg, & Zaudig, 1992), Mexico (Caraveo, Martinez, & Rivera, 1998), the Netherlands (Bijl, van Zessen, Ravelli, de Rijk, & Langendoen, 1998), and Turkey (Kýlýç, 1998).

In 1997, WHO created the International Consortium in Psychiatric Epidemiology (ICPE) to coordinate the comparative analysis of these data (Kessler, 1999). The ICPE also provides technical assistance to researchers planning new CIDI surveys. The WHO World Mental Health 2000 (WMH2000) initiative grew out of these technical assistance activities. WMH2000 is coordinating general population CIDI surveys in 20 countries in the year 2000. Participating countries are in North America (Canada, the United States), Latin America (Brazil, Colombia, Mexico, Peru), Europe (Belgium, France, Germany, Italy, the Netherlands, Spain, the Ukraine), the Middle East (Israel), Africa (South Africa), and Asia (China, India, Indonesia, Japan, New Zealand).

Several important results consistently emerge from the DIS and CIDI surveys (ICPE, in press): (1) mental disorders are among the most prevalent classes of chronic diseases in the general population, with lifetime-to-date prevalences often close to 50 percent of the population and with 12-month prevalences typically in the 15–25 percent range (Robins & Regier, 1991); (2) mental disorders typically have much earlier ages of onset than other chronic diseases, with median ages of onset in the early to late teens for anxiety disorders in most of these surveys, and median ages of onset in the early to mid-20's for mood and substance use disorders (ICPE, in press); (3) mental disorders are among the most impairing of all chronic diseases (Kessler, Mickelson, Barber, & Wang, in press); (4) respondents with the most severe and disabling mental disorders usually meet lifetime criteria for a number of different ICD and DSM syndromes (Kessler et al., 1994); and (5) only a minority of the respondents in these surveys who meet criteria for a mental disorder report that they received treatment in the preceding year (Alegria et al., 2000).

The measures of disorder severity included in these epidemiologic surveys consistently are associated with probability of obtaining treatment, likelihood that treatment is in the specialty sector, and intensity of treatment (Alegria, Bijl, Lin, Walters, & Kessler, in press). These findings suggest that there is some rationality both in help-seeking and in the allocation of treatment resources. However, the surveys also show that only a minority of patients describe a course of therapy that even minimally satisfies current treatment guidelines (Katz, Kessler, Lin, & Wells, 1998). There is a great deal of work still to be done in disseminating treatment guidelines for mental disorders and in developing quality assurance mechanisms to guarantee that these guidelines are followed.

The high rates of disorder found in these surveys have led some commentators to question the plausibility of the prevalence estimates (Regier et al., 1998). As clinical reappraisal studies clearly show that the prevalence estimates in CIDI surveys are not higher than those obtained in blind clinician reinterviews (Kessler, Wittchen, et al., 1998), concerns about the high prevalence estimates focus largely on the underlying validity of the ICD and DSM systems. In response to these concerns, clinical significance criteria were added to nearly half the diagnoses in the fourth edition of the DSM system. The goal was to address the perceived problem that the previous diagnostic criteria led to overdiagnosis of disorder among people with clinically insignificant symptoms. However, this approach has generated controversy regarding the legitimacy of including these new criteria (Spitzer, 1998).

Irrespective of the ultimate resolution of the threshold issue, concerns about high prevalence have led to a new interest in the assessment of severity and impairment in psychiatric epidemiologic surveys, as well as a view that dimensional assessments of mental disorders and global assessments of case-level psychiatric morbidity are more useful than fine-grained evaluations of many separate ICD or DSM disorders. The new WMH2000 surveys include structured versions of standard, disorder-specific, dimensional clinical severity scales and assessments of the functional impairments and disabilities associated with current mental disorders in order to obtain this sort of dimensional severity information. WHO also developed a new interview to carry out a multidimensional assessment of impairment and disability for this purpose, the WHO Disability Assessment Schedule (Ustun & Chatterji, 1999). Importantly, the WMH2000 surveys also will carry out identical assessments of the functional impairments and disabilities associated with a representative sample of physical disorders in order to provide comparative information.

Adult Clinical Epidemiologic Surveys

The technology developed in the ECA study to carry out fully structured psychiatric diagnostic interviews more recently has been extended to primary care settings. The first of these studies was the Medical Outcomes Study. This study investigated a series of chronic diseases, including depression, and documented that depression is associated with levels of functional impairment in a wide range of life domains that are comparable to, if not greater than, those found among patients with physical disorders such as hypertension, diabetes, and arthritis (Wells et al., 1989). Subsequent clinical epidemiologic surveys attempted to evaluate the impairments associated with a broader range of mental disorders in primary care samples. The largest and most influential of these is the WHO Primary Care Collaborative Study (Sartorius & Ustun, 1995). These surveys document that mental disorders are highly prevalent among people who seek help from family physicians, that these disorders are associated with substantial impairment in role functioning, and that most of these disorders go undetected by primary care physicians. A series of innovative programs based on these surveys have been developed to help primary care doctors detect and treat mental disorders (Katon et al., 1995).

One of the most important findings of these clinical epidemiologic surveys is that untreated comorbid mental disorders might complicate the treatment and management of physical disorders. For example, one study (Roose & Glassman, 1994) documented that comorbid depression is a powerful predictor of early mortality among survivors of first heart attacks. Based on this finding, new interventions screen for and treat depression among cardiac patients. A number of related, but as-yet-unpublished, clinical epidemiologic research initiatives currently under way are investigating the effects of comorbid mental disorders on the onset, course, and management of other physical disorders. Preliminary studies suggest that at least some of these investigations will yield important practical results (Stoudemire, 1995).

Surveys of the Elderly

Geriatric epidemiologists must grapple with concerns about the accuracy of assessment, based on the fact that a focus of inquiry in geriatric studies is the cognitive functioning of respondents. Other important complications include difficulties in vision, hearing, and physical functioning, which influence both willingness to participate in surveys and the ability to participate completely. A number of special research diagnostic interviews, both for use by clinicians (Copeland, 1994) and for use by lay interviewers (Henderson et al., 1993), have been designed to address these problems. Surveys based on these instruments show that early stages of dementia are quite common among elderly people in the community (Gallo, 1995). A practical problem in studying these disorders in community samples is the frequent difficulty of distinguishing between normal behaviors and early cognitive decline. Methodological research continues to refine instruments to sensitively detect early cognitive problems in community samples.

Important epidemiologic research is being done on modifiable risk factors for dementia among elderly people. Recent studies have shown that many of the same variables that are risk factors for cardiovascular disease are also risk factors for dementia (Breteler, Claus, Gorbbee, & Hofman, 1994; Ott et al., 1998). There has also been a great deal of interest in the widely replicated finding that the apolipoprotein E genotype is a risk marker for Alzheimer's disease (Farrer et al., 1995). In addition, there is some evidence that the rates of Alzheimer's disease and dementia are lower in ethnically similar individuals in less-developed countries than in developed countries (Hendrie et al., 1995). There are many plausible risk factors that could explain these differences, including higher rates of smoking, exposure to lead-based paint, and fatty diets in developed countries. Expansion and replication of research on cross-national differences are needed to systematically evaluate the effects of these and other risk factors.

Another issue of interest in studies of the elderly is depression. There is a great deal of concern about geriatric depression among clinicians. Yet, epidemiologic studies have found surprisingly low rates of major depressive disorders among elderly respondents (Beekman, Copeland, & Prince, 1999). The discrepancy between expectation and the epidemiologic evidence has raised concerns that the low rates of depression in epidemiologic studies may be due, at least in part, to methodological artifacts. Consistent with this concern, community studies using dimensional measures of depressed mood and related symptoms show increases among the elderly (Kessler, Foster, Webster, & House, 1992). Furthermore, latent trait analysis shows that the symptoms of major depression change with age (Gallo, Anthony, & Muthén, 1994). Ongoing methodological studies are attempting to resolve the continuing confusion in this area.

Systematic Underreporting

The methodological advances surrounding development of the DIS and other fully structured measures of disorder and severity address many of the measurement problems that previously limited progress in psychiatric epidemiologic studies of adults. Empirical data produced by the new generation of surveys initiated by the ECA study also have stimulated healthy debate about deeper conceptual issues regarding the validity of the ICD and DSM classification systems. However, formidable challenges remain on the measurement front. The fact that mental disorders are highly stigmatized conditions causes many people to keep them private because of embarrassment or fear of discrimination, which means these conditions can only be defined on the basis of clusters of symptoms reported by these same people.

In the case of patients seeking professional treatment, there is reason to believe that self-reports will be fairly complete and honest. However, since this is not the case in epidemiologic surveys, it is not surprising that there is rising concern that underreporting is a very serious problem in surveys of this sort (Lee & Renzetti, 1990). Consistent with this concern, methodological studies have shown that reports about mental disorders, substance use problems, and other topics—such as abortion, criminal behavior, and homosexuality—are extremely sensitive to subtle variations in context and to mode of questioning (Turner, Ku, Rogers, Lindberg, Pleck, & Sonenstein, 1998).

An important implication of these findings is that the prevalences of emotional problems reported in epidemiologic surveys should generally be considered lower bound estimates rather than accurate reflections of the true prevalences in the population. This is true even when interviews are carried out by clinicians, as methodological research shows that some respondents decrease their disclosure of embarrassing information when they are aware that their interviewer is a mental health professional (Reissman, 1977). This problem can bias estimates of correlates if there is systematic variation in willingness to disclose symptoms as a function of a putative risk factor. This differential willingness hypothesis has been proposed as a plausible explanation for the widely observed finding that women report higher rates of anxiety and depression than men (Kessler, 2000).

Grappling with the problem of systematic underreporting is a major challenge for the future of psychiatric epidemiology. The problem is exacerbated in studies of children, where we have to grapple with the issues associated with combining data from multiple informants, some of whom (the parents) may wish to avoid blame for the problems of the children, while others (the children) may sometimes want to brag and exaggerate some problems that they see in a positive light (e.g., substance use and some aspects of juvenile delinquency). One way of tackling these complex difficulties is to build on the work of survey methodologists, who have developed a number of strategies to increase the accuracy of responses to embarrassing questions. Variation in responses can also be studied as a function of question sensitivity in split ballot experiments built into epidemiologic surveys that manipulate wording, anonymity, mode, or other aspects of the question-answering situation in an effort to investigate sensitivity of responses to these manipulations. Finally, it is possible to include standard psychometric measures of social desirability, nay-saying, or lying in epidemiologic surveys and to use responses to these measures to investigate the possibility that risk-factor effect-size estimates are biased because of their associations with these measures.

Small-Area Estimation

Descriptive epidemiologic studies are often used by public health agencies to estimate the magnitude of untreated disorders and to study barriers to receiving treatment for purposes of planning future changes in outreach and treatment activities. However, these planning activities are usually carried out much more frequently (typically on an annual basis) than epidemiologic surveys (typically no more than once a decade). Furthermore, planning decisions are usually made at a much lower level of geographic aggregation (typically towns, health districts, or States) than the epidemiologic surveys (typically national). It is infeasible to carry out expensive general population epidemiologic surveys more frequently or at the levels of geographic aggregation where health resource allocation decisions are made. Therefore, some other approach is needed to increase the usefulness of epidemiologic surveys for resource-allocation planning purposes.

A good deal of work along three lines is currently under way. First, a number of short, fully structured measures of psychopathology have been developed to screen for clinically significant mental disorders (Sartorius & Ustun, 1995). These instruments can be self-administered in less than 10 minutes and yield fairly accurate assessments of overall psychopathology (i.e., the likelihood that the respondent has any clinically significant psychopathology) as well as useful provisional information about differential diagnoses. The short administration time and the ability to implement by self-administration make these screening instruments much more feasible to use in ongoing local data collections than the more comprehensive interviewer-administered instruments like the DIS and CIDI that are typically used in epidemiologic surveys.

Second, a number of ongoing data collection systems that make use of these screening measures have been developed and implemented for purposes of screening individuals in need of treatment and for charting aggregate trends in the prevalence of unmet need. Systems of this sort are available as part of periodic health risk appraisal surveys carried out by employers and managed health care organizations. The expense is minimized by using one of several low-cost data collection methods that include (1) paper and pencil self-administration (typically in mail surveys) coupled with optical scanning of responses; (2) computerized self-administration (typically carried out in a doctor's office); and (3) interactive voice response administration (in telephone surveys) using a digitized voice to ask questions over the telephone and a telephone touchtone keypad to enter responses.

Third, statistical methods are being developed to make small-area estimates of disorder prevalences and of the unmet need for services from large-scale population surveys (Schaible, 1996). These methods blend the direct small-area data collected in ongoing screening surveys with more in-depth periodic data collected in large-scale epidemiologic surveys. There has not yet been an attempt to develop integrated systems that would coordinate the collection and integration of these two types of data, although proposals along these lines have been advanced (Kessler, Berglund, et al., 1998). The development of such systems represents an important challenge for the future of descriptive psychiatric epidemiology.

Analytic and Experimental Psychiatric Epidemiology

Modifiable Determinants of Illness Onset and Course

Analytic epidemiology is the part of epidemiology that uses nonexperimental data to generate, refine, and provisionally test causal hypotheses (Mausner & Bahn, 1984). Experimental epidemiology, as the name implies, is the part of epidemiology that tests hypotheses by evaluating the effects of interventions on the prevention or amelioration of disease outcomes. Analytic and experimental psychiatric epidemiology are much less developed than in most other branches of the discipline because of conceptual and measurement problems. Another contributing factor is that the causal mechanisms involved in the onset of mental disorders are related much more strongly to broad measures of environmental adversity than to the comparatively narrow and easily modifiable risk factors (e.g., diet, exercise, smoking) that increase the risk of such chronic physical illnesses as cancer and heart disease.

Important work is emerging in analytic psychiatric epidemiology focused on modifiable risk factors for particular disorders. Examples include work linking obstetrical complications to risk of childhood-onset schizophrenia (Nicolson et al., 1999), exposure to famine during childhood to risk of antisocial personality disorder (Neugebauer, Hoek, & Susser, 1999), and early-life lead exposure to risk of both childhood behavioral problems (Needleman, Riess, Tobin, Biesecker, & Greenhouse, 1996) and late-life Alzheimer's disease (Prince, 1998). Despite these examples, the greater complexity of environmental etiologic agents in studies of psychiatric than physical disorders has led many psychiatric epidemiologists to focus much of their analytic effort on broad nonspecific risk factors. There is a special interest in exposure to stressful life experiences, including various types of childhood adversity and adult stressors, which are consistently linked to a wide range of child, adolescent, and adult mental disorders. There is also a great deal of interest in stress-buffering factors such as social support and active coping.

As it is difficult to devise interventions that prevent exposure to stress, most experimental interventions aimed at preventing mental disorders are designed to increase access to stress-buffering resources either in total populations or in high-risk population segments. There are quite a few promising interventions of this sort (Mrazek & Haggerty, 1994). Unfortunately, psychiatric epidemiologists generally do not play central roles in these interventions for two reasons.

One reason is that most psychiatric epidemiologists are more interested in descriptive and broad-gauge analytic epidemiology than in the fine-grained analytic investigations required to target and shape preventive interventions. For example, while a great many epidemiologic studies have been done on the stress-buffering effects of social support, only a few of the researchers who did these studies have taken the extra step to refine their evaluations of social support in order to investigate the active ingredients that should be included in preventive interventions aimed at supporting socially isolated people at risk of mental disorder (Harris, Brown, & Robinson, 1999a, 1999b).

A second reason psychiatric epidemiologists are generally not involved in preventive interventions is that the community psychologists and other human services professionals who have taken the lead in most mental health preventive interventions come from clinical backgrounds and rely on their clinical experience to design and implement their programs. They see little need for the input of psychiatric epidemiology. This is a mistake, but it will take much more effort on the part of psychiatric epidemiologists to reach out to preventionists in order to make them see this mistake. A major challenge for the future is to integrate psychiatric epidemiologists into these efforts.

It is important to realize that there is another class of intervention programs, much larger than the ones discussed above, that also represents an opportunity for epidemiologic collaboration. This class comprises the many government entitlement programs that exist in most developed countries, such as public assistance for the unemployed, social security for retired people, and aid to single mothers with dependent children. While these programs are much more than mental health preventive interventions, they have enormous implications for mental health. These programs predominantly are designed by economists and implemented by social workers and other human service professionals; they, therefore, would profit from the input of psychiatric epidemiologists.

Developmental Psychopathology

Drawing on other branches of developmental science, child psychiatric epidemiology is beginning to apply developmental principles to better understand risk for psychiatric disorders. Developmental principles can usefully be applied both to modeling the development and clustering the symptoms and to improving our understanding of risk and of the timing of risk factor effects.

Focusing first on the development and clustering of symptoms, converging evidence from studies of adults (Christie et al., 1988) and children (Bardone, Moffitt, Caspi, Dickson, & Silva, 1996) shows that the first symptoms of disabling adult psychiatric disorder can appear very early in life. Once established, the course of psychiatric disorder from childhood to adulthood presents examples of both homotypic and heterotypic continuities. Pure emotional disorders in childhood appear to be associated only with emotional disorders in adulthood in both sexes (homotypic continuity) (Harrington, Fudge, Rutter, Pickles, & Hill, 1991). Behavioral disorders in boys show similar homotypic continuity (Robins, 1974), but behavioral disorders in girls are associated with a wider variety of adult disorders including personality disorders and somatizing, depression, and anxiety disorders (both homotypic and heterotypic continuity) (Zoccolillo, Pickles, Quinton, & Rutter, 1992).

Turning to timing and risk, the use of temporal relationships to unearth causal mechanisms is an approach that child psychiatric epidemiology borrowed from the epidemiology of cancer and cardiovascular disease (Breslow & Day, 1980). Age at exposure to risk, duration of exposure, and intensity of exposure are different aspects of risk exposure with significance for etiology. Studies of divorce, for example, show that a child's age when parents divorce predicts later problems differently for boys and girls. Boys appear most distressed when the divorce occurs before the child's puberty, and girls after their puberty (Wallerstein, 1987). Other studies, in comparison, show that persistence of family adversity is an important differentiating factor in predicting the long-term effects of early adversity on adolescent (Offord et al., 1992) and adult (White, Moffitt, Earls, Robins, & Silva, 1990) disorders. Dose-response relationships have also been documented between childhood adversities and both child (Rutter, 1979) and adult (Kessler, Davis, & Kendler, 1997) outcomes.

There are now close to a dozen longitudinal studies around the world that provide the necessary observational data for us to begin formulating hypotheses about the developmental course of mental illness across the first two decades of life (Sameroff & Seifer, 1995). These studies show clearly that the rates of most psychiatric disorders and symptom patterns within disorders both change with age. For example, below the age of 10, suicidal thoughts and behaviors are rare, while these rates increase dramatically during adolescence (Shaffer & Piacentini, 1994). Loeber's synthesis of the research literature on antisocial behavior in boys proposes that there are three different developmental pathways involving antisocial behavior (Loeber, Green, Lahey, Christ, & Frick, 1992): an early authority conflict pathway; a covert, rule-breaking pathway; and an overt, aggressive pathway. If a cross-sectional view is taken of children's behavior, those who pursue any of the three pathways share many characteristics. Longitudinal studies, however, reveal distinct patterns and prognoses over time, with the worst prognosis for those in the third, overt, aggressive pathway.

It is also becoming increasingly clear that rates of disorder change differentially in boys and girls. Emotional disorders (anxiety and depression) show considerably more persistence for girls than boys, while the opposite is true for behavioral disorders (conduct and oppositional disorders, substance abuse and Attention-Deficit Hyperactivity Disorder) (McGee, Feehan, Williams, & Anderson, 1992). Early anxiety disorders have a higher probability of remission than other disorders during adolescence (Costello & Angold, 1999). Although the evidence is limited, these differential patterns of continuity and discontinuity may extend back into the preschool years. For example, overactivity and restlessness in 3-year-olds (more common in boys) is associated with antisocial behavior 5 years later, while the presence of multiple fears at age 3 (more common in girls) is unrelated to emotional disorder 5 years later (Richman, Stevenson, & Graham, 1982; Stevenson, Richman, & Graham, 1985).

Geriatric epidemiologists have also begun using a life course perspective. They chart the impact of scheduled normative developmental events (e.g., retirement) and unscheduled normative events (e.g., widowhood) on mental health (Umberson, Wortman, & Kessler, 1992). There is also a new interest in successful aging (Rowe & Kahn, 1998) and in the positive aspects of aging, such as the development of wisdom (Baltes & Staudinger, 2000).

Primary Mental Health Care

One triumph of public health throughout most of the world is the drop in infant and childhood mortality and morbidity, along with their adult sequelae, associated with the spread of primary medical care for children (Shelov, 1994). There is no country in the world with an equivalent system of primary mental health care. Conceptual work to develop the observational, theoretical, and experimental guidelines for such an approach to the prevention of mental illness is only just beginning. Given the evidence that few risk factors are disorder-specific, this broad-based approach to risk reduction might be more appropriate than an approach based on specific risk factors, such as the focused drug-use and suicide prevention programs now being implemented in the United States.

One epidemiologic observation potentially of great importance in this regard is that the vast majority of adults with serious mental disorders experience a series of comorbid psychopathic syndromes that often include a combination of panic, generalized anxiety, depression, phobia, and substance abuse (Kessler et al., 1994). These syndromes differ substantially in their ages of onset. Anxiety, oppositional-defiant, and attention-deficit problems are typically the component syndromes with the earliest ages of onset. Assuming that this cumulation of disorders is of causal significance—a hypothesis desperately in need of evaluation—intervention efforts among children and adolescents to prevent the cumulation of multiple psychopathological syndromes hold out great promise for reducing the prevalence of serious mental disorders (Kessler & Price, 1993). The analytic investigation of patterns and determinants of this cumulation of syndromes is a critically understudied area in developmental psychiatric epidemiology.

Genetic Epidemiology

In a paper on the future of psychiatric epidemiology, Lee Robins (1992) suggested that the greatest hope for breakthroughs in our understanding of the etiology of mental disorders comes from the methods of genetic epidemiology, a discipline that examines the extent to which genetic and environmental factors contribute to disease etiology. Designs that hold constant either the environment while allowing variation in genetic factors (e.g., monozygotic vs. dizygotic twins reared together) or the genetic background while allowing environmental variation (e.g., adoptees) provide a powerful set of tools to gain understanding of the complex interactions between genes and environment in disease etiology. In addition, genetic epidemiologic studies can inform the diagnostic nomenclature (Tsuang, Faraone, & Lyons, 1993).

The genetic epidemiology of psychiatric research moved through several developmental stages with startling rapidity. Early work focused without much success on efforts to identify major genes for such diseases as schizophrenia, bipolar disorder, and autism. At the same time, adoption and twin studies documented (something we tend to forget was an open question only a few years ago) that there is a major heritable component to a number of psychiatric disorders (Rutter, Silberg, O'Connor, & Simonoff, 1999). The major impediments to progress have been limited knowledge at both the levels of the genotype and the phenotype. Inspection of the relative risk of the major psychiatric disorders in populations reveals that most are characterized by complex modes of inheritance, including gene-environment interaction, oligogenic or polygenic inheritance, and/or the similar phenotypic expression yielded by numerous major genes. With increasing focus on the identification of "endophenotypes" or those components of disorders that are transmissible in family and twin studies, more homogeneous definitions of psychiatric phenotypes will increase our ability to identify both genetic and environmental factors underlying the development of psychiatric disorders.

Based on these early results, current field epidemiologic studies concentrate on gene-environment interactions and correlations (Rutter, 1994). These studies ask what we can learn, especially from developmentally informative studies, about the times and situations that encourage or inhibit gene expression in light of the fact that genes require environments in which to express themselves. For example, recent work has shown that the increase in the rate of depression in girls more than boys after puberty is due to an increased heritability of depression in postpubertal girls and, more specifically, to an increased genetically controlled emotional vulnerability to stress (Silberg et al., 1999). Other research on a related topic has shown that the female increase in depression with puberty is related to increasing levels of testosterone and estrogen rather than to age per se or to other aspects of development (e.g., Tanner stage or social factors) (Angold, Costello, & Worthman, 1999).

Meanwhile, completion of mapping the whole human genome has begun to change the nature of genetic psychiatric epidemiology. With increased knowledge regarding the specific neurobiologic factors involved in the pathogenesis of psychiatric disorders and identification of susceptibility genes, epidemiology will become central to the study of the population distribution of such genes. Future epidemiologic studies will focus on careful identification of cases from the general population, so that the transmission of candidate genes from parent to child can be examined in unbiased samples using new statistical methods for association studies (Hauser, Boehnke, Guo, & Risch, 1996; Risch & Merikangas, 1996; Uhl, Gold, & Risch, 1997). It is likely that DNA will be collected routinely in epidemiologic studies, so that as new candidate genes appear, their contribution can quickly be evaluated in well-characterized, representative samples. Moreover, epidemiologists will be better able to identify environmental conditions that promote or protect against gene expression using case-control designs based on genetic markers. Innovative designs, such as the "children of twins" approach, will tease out some of the remaining problems in partitioning genetic and environmental effects. However, from the point of view of intervention, the interest for the next decade or two will lie in working on when and how to intervene at the environmental level to inhibit the expression of genetic predispositions to disorders and to support the expression of the beneficial effects of genes associated with low risk.

Barriers to Help-Seeking

Retrospective epidemiologic studies of speed of initial treatment contact show that it often takes many years for people with anxiety, mood, or substance disorders to seek professional help after first onset of their disorder (Olfson, Kessler, Berglund, & Lin, 1998). Furthermore, epidemiologic studies of more recent service use show that only a minority of people with a recent mental disorder obtain treatment (Alegria et al., 2000). These are disturbing results, especially in light of clear evidence that treatments for most common mental disorders are both safe and effective.

Studies of the determinants of help-seeking in the United States show that financial barriers are important impediments to treatment and that treatment rates increase substantially when these barriers are removed (Frank & McGuire, 1986). At the same time, a recent comparative study of help-seeking in the United States and Canada found that the same low proportion of people with mental disorders seeks treatment in the two countries even though Canadians enjoy free access to mental health treatment while people in the United States do not (Kessler, Frank, et al. 1997). Investigations of reasons for not seeking treatment found that the typical person with mental illness not in treatment reports a number of reasons for not seeking help, including perceived lack of efficacy of treatment, believing that the problem will eventually go away by itself, and feeling that he/she wants to handle the problem himself/herself, without outside help.

These and related findings strongly suggest that misunderstandings about the nature of mental illness and perceived stigma continue to interfere with the help-seeking process. Public education campaigns have been launched in some countries to address these problems, but these efforts are too recent to have developed a solid knowledge base regarding effective communication messages or channels or to have tested emerging hypotheses about other effective outreach possibilities. However, this is likely to be an area of considerable growth over the next decade.

Challenges for Psychiatric Epidemiology

Analytic Epidemiology

As the neurosciences continue to advance knowledge regarding human brain structure and function, the relevance of neurobiologic factors to psychiatric disorders at the population level is likely to increase. There is an urgent need for closer collaboration between epidemiology and clinical psychiatry, as there is a large gap between clinical and population samples with respect to many of the major risk factors now under investigation in biologic psychiatry. Gender and age differences provide important clues regarding underlying biologic mechanisms for emotional, cognitive, and behavioral regulation that could be far more intensively studied in the future. Likewise, epidemiologists need to expand their tools to include biologic measures as reliable and valid biologic correlates of psychiatric disorders emerge with advances in neuroscience.

An important task for the next half-century in psychiatric epidemiology will be to understand how multiple risk factors interact over time in producing multiple outcomes. This understanding will be achieved only if the study of risk factors is not narrowed by disciplinary orientation; and only if the study of outcomes is not narrowed by strict confines of diagnosis. Breaking loose from the confines of discipline and diagnosis will lead to progress in comprehending the web of causation for the complex combination of phenomena we call mental disorders (Eaton & Merikangas, in press).

Integration With Prevention Science and Social Policy Analysis

A challenge for psychiatric epidemiologists and prevention scientists alike is to bridge the gap that currently exists between analytic epidemiology and prevention research. Psychiatric epidemiologists also need to become involved in more large-scale social policy research interventions. For example, recent Federal welfare reform legislation in the United States led to a series of State-level natural experiments moving welfare mothers into the labor force. Early evaluations of these experiments by economists clearly show that the previously neglected high rates of mental disorders found among welfare recipients are major impediments to successful transitions into the labor force (Friedlander & Burtless, 1996). This observation has stimulated debate regarding the importance of providing mental health services as a central part of welfare-to-work transition programs. Unfortunately, this debate has been uninformed by empirical or conceptual input from psychiatric epidemiologists. It is critical that psychiatric epidemiology becomes more central to this and other emerging social welfare and entitlement program reform debates and interventions.

The Importance of Secondary Prevention

Most theorizing and research on mental health prevention continues to focus on primary prevention either with a universal focus or a high-risk focus. However, many universal preventive intervention trials yield discouraging results (Mrazek & Haggerty, 1994). This is slowly leading to an interest in selective or targeted interventions, sometimes overlaid on universal interventions. Targeted secondary interventions (i.e., interventions aimed at preventing the progression of incipient disorders) are of particular interest. This is true for two reasons. First, as noted earlier in this paper, we increasingly realize that prodromes of many mental disorders start at such an early age that it is very difficult to envision a broad-based problem that could prevent their occurrence. Second, the complexities of interventions to prevent the progression of mental disorders from early manifestations to more serious and chronic cases are so great that it is necessary to focus delivery of these interventions in high-risk segments of the population. Analytic psychiatric epidemiologists need to reorient their research to facilitate the development and testing of hypotheses regarding focused secondary preventions of this sort. The importance of linking analytic epidemiologic research to preventive interventions becomes increasingly clear as this need is more commonly recognized.

One very important and currently neglected research paradigm for this purpose is the naturalistic longitudinal study of the determinants of illness course in cohorts of current patients. There have been several very influential large-scale longitudinal naturalistic studies studying illness course in representative adult patient samples (Coryell et al., 1994), but these have been clinical studies rather than epidemiologic studies. Analytic investigations of the predictors of these outcomes are needed to support the development of principled adult secondary preventive interventions.

Understanding the Determinants of Help-Seeking

The problem of unmet need for treatment is much more severe in the mental health arena than in most other areas of medicine. Standard conceptual models for studying the help-seeking process highlight the importance of health beliefs, including perceived need for treatment, perceived efficacy of treatment, barriers to seeking treatment, and facilitating factors (Janz & Becker, 1984). These models are useful in understanding and modifying the help-seeking process in many different areas of medicine. However, in the case of mental illness, it might be useful to extend these models in several ways. One way is to appreciate that the range of cultural categories that are available to make sense of signs and symptoms of mental disorder is much greater than for other illnesses, leading to greater complexity in the initial stage of defining oneself as in need of help (Skelton & Croyle, 1991).

Another potentially useful way of extending standard conceptual models begins with the realization that the range of culturally available and acceptable strategies for coping with emotional problems is much more diverse than for physical disorders. Alternative and complementary medicine, the use of informal social support networks, other problem-focused strategies aimed at resolving the presumed situational determinants of the emotional problems (e.g., lifestyle change), and cognitive strategies aimed at redefining the situational determinants of the distress so that they lose their sting (e.g., cognitive reappraisal, displacement) are all ways of coping with mental illness. Given the stigma associated with mental illness, it is reasonable to assume that most people will work their way through many, if not all, of these strategies before seeking help from a mental health professional. Insight into the help-seeking process might be increased if epidemiologic studies conceptualized professional treatment as the end result of a defensible process of sorting through a hierarchy of coping strategies in which treatment ranks rather low on the preference hierarchy of many people.

Conclusions

A number of encouraging advances occurred in psychiatric epidemiology over the past two decades. However, the problem of uncertainty regarding diagnostic categories and criteria and the problem of underreporting because of respondent reluctance to admit symptoms continue to be major sources of difficulty in cumulating knowledge. Additional problems exist in studies of special populations, including youth and the elderly. Innovative methods of minimizing and evaluating the effects of measurement error and especially of systematic underreporting are needed to advance the aims of analytic epidemiology. Psychiatric epidemiologists need to move beyond the focus on description and analysis of broad-gauged risk markers to study modifiable intervention targets and to develop collaborations with the prevention scientists and social policy analysts who are currently at the forefront of developing, implementing, and evaluating interventions.

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Chapter 6

Status of National Accountability Efforts at the Millennium

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A broad array of activities is under way at the national level to promote accountability in mental health practices. The purpose of this chapter is to provide some background about the sources of these activities; a description of current efforts; and some projections about the future. Additional readings about each of these topics are provided at the end of the chapter.

What Has Changed?

Accountability efforts in mental health are relatively recent. Generally, they do not date back more than a decade. The foundation for these efforts can be located in the demise of national health care reform, the advent of managed behavioral health care in both the public and private sectors, and the continued erosion of resources for behavioral health care.

President Clinton's proposed Health Security Act included specific provisions for the development of health report cards. Such report cards were seen as a vehicle both for enhancing consumer choice among health plans and for promoting competition and accountability. Although the Health Security Act was never passed, the concept of health report cards gained broad acceptance in corporate and governmental circles. The concepts of competition and accountability in the health arena soon pervaded mental health as well.

The advent of managed behavioral health care in both the public and private sectors also fostered a new concern with responsiveness to customers. In the private sector, this took the form of satisfaction surveys about plan performance; in the public sector, it took the form of surveys about consumer expectations and problems with plans. These efforts were promoted by a broad-based consumerism in American society and a well-defined consumer movement in public sector mental health.

Beginning at the time of the national health care reform debate in the early 1990s, and continuing into the present, a dramatic decline has been witnessed in the available resources for mental health. "Commodification," the progressive transformation of health care services into commodities, like corn or crude oil, which are subject to market forces, has led to dramatically lower prices for mental health services. According to the most recent HayGroup report, the value of behavioral health benefits decreased 54 percent, from 1988 to 1998, while the value for general health benefits saw a modest decrease of 11.5 percent during this time frame (HayGroup, 1999). In another place (Manderscheid, 1998), we have argued that this decline is due to the lack of accountability tools, i.e., practice guidelines, outcome assessments, report cards, and performance indicators available in the mental health field. Without such tools, those negotiating managed care contracts have no basis for "competition based on quality" as opposed to "competition based on cost."

The confluence of all of these factors has promoted strong efforts at the national level to develop accountability tools.

What Is Accountability?

In the past, accountability generally referred to *financial* responsibility, but much less frequently to *quality* responsibility. Further, quality accountability means different things to different people, since it is true that where you sit determines what you see. One can distinguish four different types of quality accountability:

(1) *Accountability for practices:* This concerns assessment of the degree to which providers follow generally agreed-upon procedures for delivering care. It also can refer to the degree to which systems of care include

generally agreed-to components and management practices.

(2) *Accountability for outcomes:* This concerns assessment of outcomes from the point of view of the client or the provider or both. It is intended to answer the question: "What changes occurred for the client as a result of the intervention?" In the past, work on outcomes usually has reflected only the provider's point of view. More recently, managed behavioral health care has been introduced to the concept of personal outcomes, in which the consumer and family points of view are ascendant. Needless to say, the elements of outcome emphasized by the provider and by the consumer are likely to be different.

(3) *Accountability for plan performance:* This refers to report card measures about how plans are operating. Generally, these report cards are from the point of view of the payer or the consumer and/or family. Clearly, different features of performance will be emphasized depending upon the nature of the audience.

(4) *Accountability for system performance:* This refers to performance indicators that reflect how large-scale systems are operating. Such large-scale systems can be entire States, all activities of a corporate entity, or national efforts around a particular issue. The point of view can be that of a State legislature, corporate stockholders, the U.S. Congress, or other mental health or substance abuse communities. Indicators used will depend upon the point of view.

These different levels of accountability are interrelated. Practice and outcome measures can be aggregated and included in report cards. Report cards can be aggregated and included in broader system performance measures. One always needs to be aware of what aggregations are being incorporated as well as the point of view of the intended accountability in order to judge potential bias.

Can Accountability Be Made Uniform?

Quality tools to promote accountability seem to work best when applied uniformly. Hence, one can currently see many efforts to promote uniformity of measurement. Yet, efforts toward uniformity frequently conflict with the trend toward commodification. In a commoditized environment, products are sold based upon uniqueness, not upon similarity to other products. In a commodity market, one would promote unique quality tools, not quality tools shared in common. Results from a recent survey conducted for the Center for Mental Health Services show this process clearly (Public Sector Outcome Measurement Interest Group, 1998). A preponderance of ambulatory facilities surveyed said they currently were using outcome measures (85 percent). However, only a small minority were using outcome measures recognized at the national level. The remaining facilities were using homegrown instruments "especially designed to meet local needs" (Table 1).

Table 1: Type of instruments/measures used to collect client-level outcomes data

Instrument/measure	*n*	percent
BASIS-32	77	14.5%
SF 36/12	21	4.0%
Lehman Quality of Life	12	2.3%
SCL90	15	2.8%
GAF	303	57.1%
Axis V Subscales	95	17.9%
CSQ-8	51	9.6%
BSRI	19	3.6%
In-house development	338	63.7%
Conduct Focus Groups	53	10.0%
Other	158	29.8%

Total equals more than 100% because of multiple responses.

Source: Public Sector Outcome Measurement Interest Group (1998).

How Can This Issue Be Addressed?

One needs to develop some key criteria by which to judge quality tools for accountability. These criteria should reflect the essential characteristics that quality tools need to possess before we can consider them appropriate for use. They also will need to address concerns with "commodification." Generally, three criteria are proposed (Manderscheid, 1999):

- *Simplicity*—Accountability reports would promote the understanding and credulity of the intended audience.
- *Communality*—A small set of common accountability measures would be used for all programs, supplemented by additional program-specific measures to address unique concerns. Such common measures would facilitate the development and credibility of the behavioral health field, and they would also permit historical and cross-system benchmarking and comparisons.
- *Appropriateness*—Measures would balance concerns with cost and quality. Cost per output or cost per outcome would advance this dialogue in a commodity market, but additional measures, such as need and access, would also be required. *Need*, i.e., the number of people in a given population who require care, can be usefully compared to *access*, the number of people who receive care. Need and access relate to the effects achieved.

One also must consider the fact that quality tools can be viewed as elements not only in an accountability framework, but also in a quality improvement strategy undertaken as part of total quality management, which is fully consistent with the move to commodification. In a quality management environment, one first must arrive at a definition of goals through a consideration of key values and principles. At the clinical level, this can take the form of a discussion between a consumer and a clinician about the goals of the intervention. At the plan level, this can be a discussion among key participants—consumers, family members, providers, payers, and managed care representatives—about desired plan goals.

Once goals are defined, then key clinical and system practices need to be implemented to arrive at those goals. Outcome measures at the individual level, report card measures at the plan level, and performance indicator measures at the broader system level are each intended to measure the degree to which these goals have been attained. Feedback loops are introduced to promote better goal attainment through the modification of practices as original baselines are accomplished. Figure 1 denotes these relationships.

What Are the Current Developments?

This section of the chapter will provide an overview of current national activities with respect to the development of quality tools for mental health. In each area, an effort will be made to define the topic, summarize current efforts, and provide a prognosis for the future. Attention will be focused on efforts that specifically address mental health; however, where they exist, related efforts also will be noted.

Practice Guidelines

What Are Practice Guidelines?

Practice guidelines are what their name implies. They are intended to be signposts for good clinical care (Practice Guidelines Coalition, 1998). At least two types of practice guidelines can be distinguished: clinical practice guidelines, which are signposts for clinicians delivering specific interventions; and system practice guidelines, which are signposts for program and plan managers regarding organizing and operating service delivery systems.

Much confusion surrounds the development and implementation of practice guidelines (Noonan, Coursey, & Edwards, 1998). Most mental health disciplines are developing clinical practice guidelines for their members. When viewed across disciplines, these guidelines are sometimes inconsistent. Hence, to an outsider, the field appears uncoordinated and disorganized.

The same can be said about system guidelines, but for different reasons. Very few system guidelines have actually been developed for the mental health field. Two notable exceptions are practice guidelines for the Program of Assertive Community Treatment (PACT), developed by the National Alliance for the Mentally Ill (NAMI) (Allness & Knoedler, 1998), and the practice guidelines for case management developed by the National Association of Case Management (NACM) (Giesler & Hodge,

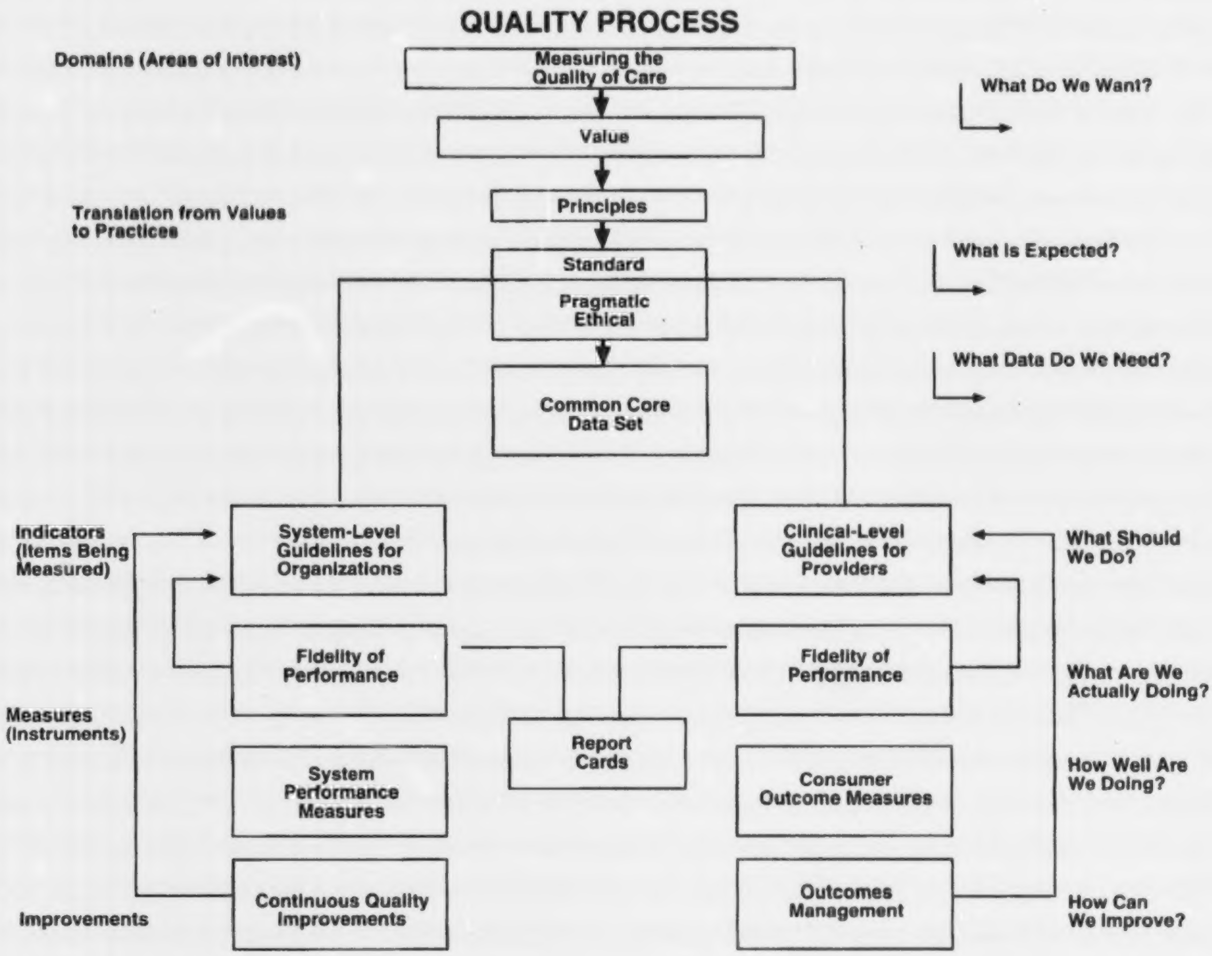
QUALITY PROCESS
Domains (Areas of Interest)
Measuring the Quality of Care
What Do We Want?
Value
Principles
Translation from Values to Practices
Standard
What Is Expected?
Pragmatic Ethical
What Data Do We Need?
Common Core Data Set
Indicators (Items Being Measured)
System-Level Guidelines for Organizations
Clinical-Level Guidelines for Providers
What Should We Do?
Fidelity of Performance
Fidelity of Performance
What Are We Actually Doing?
Measures (Instruments)
Report Cards
System Performance Measures
Consumer Outcome Measures
How Well Are We Doing?
Improvements
Continuous Quality Improvements
Outcomes Management
How Can We Improve?

Figure 1. Quality process

1999). Beyond these two examples, little has been done to define or elaborate this topic. Practice guidelines should aid rather than impede the organization and delivery of care. Used appropriately, they represent signposts that can help chart the course of care.

What Work Is Currently Under Way?

The Federal Center for Mental Health Services (CMHS), Substance Abuse and Mental Health Services Administration, has provided partial support for the Practice Guidelines Coalition (PGC), an association of more than 60 national organizations and professional societies representing the behavioral health care field. The coalition has as its goal the development of simple clinical practice guidelines for use by all types of mental health providers. A process has been defined through which such guidelines can be developed based upon the best research knowledge and consensus in the field. Products the PGC has developed through this process are brief and consist of minimum key signposts for clinicians. A prototype guideline has been developed for panic disorder. A second is under development for chronic pain. The PGC is currently seeking funding from foundations to expand its work.

In a related set of activities, CMHS is developing summary papers on the current status of clinical and system practice guidelines, and *Decision Support 2000+*, which will include measures for both clinical and system practice guidelines. This information prototype is based on the public health model. It includes three general clusters of information—population, services, and effects—for three different aggregations: small geographic areas (such

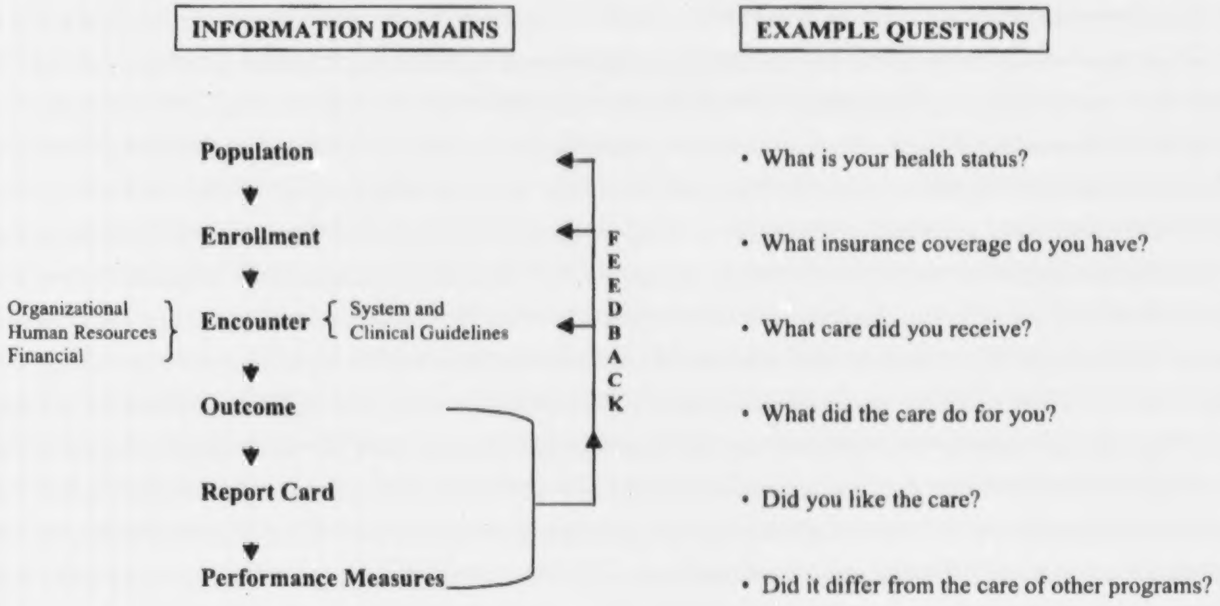
INFORMATION DOMAINS
EXAMPLE QUESTIONS
Population
Enrollment
Organizational
Human Resources
Financial
Encounter
System and
Clinical Guidelines
Outcome
Report Card
Performance Measures
FEEDBACK
• What is your health status?
• What insurance coverage do you have?
• What care did you receive?
• What did the care do for you?
• Did you like the care?
• Did it differ from the care of other programs?

Figure 2. *Decision Support 2000+* structure and use of the information prototype

as States/counties); service programs and health plans; and persons served. This information prototype is outlined in Figure 2.

Work is also under way in other Federal agencies with respect to practice guidelines. The Agency for Healthcare Research and Quality (AHRQ) has funded a number of academic centers to develop and test practice guidelines. After such guidelines are developed, AHCPR places them on a guidelines website (www.ahcpr.gov/clinic/index.html#online). This website has 33 mental health guidelines as of this writing. The U.S. Department of Defense and Department of Veterans Affairs also are seeking to implement practice guidelines as part of their quality improvement initiatives. A major focus of initial efforts is implementation of practice guidelines on depression.

In the broader context, accrediting entities, such as the National Committee for Quality Assurance, are beginning to include use of practice guidelines as a criterion for accreditation. Currently, this is not true uniformly across all accreditors, but the trend seems to be in that direction.

What Does the Future Hold?

It seems likely that there will be increased emphasis on both clinical and system practice guidelines in the future. As noted above, there is movement to organize the field around clinical practice guidelines, and there are some initial stirrings around system practice guidelines as well.

However, something is lost "twix the cup" of practice guidelines and the "lip" of their application. Most clinicians currently practicing in the mental health field have little understanding of practice guidelines, and little or no motivation to implement them. This situation may change as incentives to use practice guidelines increase. Use of information technology to train clinicians in the content and use of practice guidelines seems likely. For this to be done effectively, mental health clinicians first will need to be linked to the Internet.

Another very underdeveloped area concerns practice guidelines for self-management of disorders, and guidelines for family management when a family member has a mental disorder. Such guidelines would be fully consistent with the rapidly developing consumer and family movements in mental health and the rapidly evolving literature on disease state management in the general health field.

Outcome Measures

What Are Outcomes?

Outcomes reflect the effects of care upon the consumer. They can refer to changes in symptoms, changes in functioning, or changes in quality of life. Little work was done in this field prior to the 1990's. Work that was done in earlier periods tended to have a provider focus.

Outcomes are very important at the present time because measures of outcomes can help identify more or less effective practices, as well as the implications of such practices for financial efficiency. They will be even more important in the future because clinicians are likely to be reimbursed on the basis of outcomes achieved rather than processes delivered.

What Work Is Currently Under Way?

A prodigious effort is currently under way to conceptualize and develop outcome measurement systems. These activities range from the development of methodological standards for outcome systems, through a conceptualization of measurement domains for outcome measures for children and adults, to the role of Web-based systems for housing consumer records and collecting outcome information.

CMHS has developed a document on methodological standards for outcome measures (Outcome Measurement Standards Committee, 1996). This document outlines a set of minimum standards that should be met by all outcome measurement systems. Standards are specified for system design, sampling, data collection, data edits, and analysis.

CMHS has supported the Outcome Roundtable for Children and Families, which includes representatives from mental health and child welfare, as well as consumer, family, and academic participants. The Roundtable has prepared a framework for examining outcomes that addresses population, intervention, and outcome factors. The outcomes are subdivided into key measurement domains. These domains are safety, health, functioning, life satisfaction and fulfillment, and satisfaction with services. The framework is guided by a set of principles for outcome systems for children derived, in part, from principles for outcome systems for adults, developed earlier by the NAMI Outcome Roundtable (NAMI Outcome Roundtable, 1995). Currently, the Outcome Roundtable for Children and Families is translating the domains of measurement into actual measures, designing a pilot test, and considering issues of how information should be reported.

CMHS also supports the work of the NAMI Outcome Roundtable for Adults. That roundtable currently is considering the role of Web-based technology in collecting outcomes information from consumers and family members.

For adults, CMHS is preparing a paper on person-centered outcomes—what they mean, how they might be assessed, and implications for current activities. Person-centered outcomes proceed from the point of view of the consumer and what is desired from care. This approach has been used in the developmental disability field with a high degree of success (Council on Quality and Leadership in Support of People with Disabilities, 1997).

In 1998, CMHS received a report on current practices with respect to the use of outcome measures in ambulatory mental health facilities. A total of 1,800 facilities were sent forms and 676 responded. Among those who responded, a very high percentage reported they had outcome systems for adults (85 percent), but only a relatively small percentage used outcome measurement systems that have national recognition. See Table 1 for further information from this survey.

Two related developments are occurring at the Federal level. The U.S. Department of Health and Human Services' Administration on Children, Youth, and Families has developed the Adoption and Foster Care Analysis and Reporting System (AFCARS). An effort is being made to coordinate CMHS activities with the AFCARS. This system is intended to provide a minimum data set on adoption and foster care. A minimum national data set for all instances of adoption and foster care will be collected with the information system administered by the State. As CMHS modifies its Mental Health Statistics Improvement Program (MHSIP) minimum data set through *Decision Support 2000+*, an effort will be made to provide common data elements with AFCARS whenever possible. The second activity is related to performance indicators being developed by all Federal agencies in response to the 1993 Government Performance and Results Act (GPRA). In this activity, the Substance Abuse and Mental Health Services Administration has developed four key outcome measures, each of which is oriented to community functioning. For adults, these four measures have to do with employment, housing, criminal justice involvement, and use of alcohol and drugs. For children, these have to do with participation in school, living in a homelike environment, juvenile justice involvement, and use of alcohol and drugs.

What Does the Future Hold?

In a commoditized environment, financial rewards accrue to those who offer unique products. This drive toward uniqueness is antithetical to the need for comparable measures and is likely to increase the difficulty in implementing comparable measures across facilities and providers. Clearly, the need for comparable measures will have to be balanced with commodification as we move toward the future.

Work on outcomes likely will continue in the future, but we will be unlikely as a field to arrive at unitary outcome measurement systems over the near term. This implies that work will be needed to calibrate results across different outcome measurement systems. Some of this work already has begun.

The importance of outcome systems for the future cannot be overestimated. As public sector payers and private sector benefits managers begin to write contracts that tie reimbursement to outcomes over the next 5 to 7 years, the pragmatic need for comparable outcome measurement systems will become immediate and obvious. Already, we see harbingers of this in at-risk contracting for behavioral health care and warranted care for substance abuse. (Warranted care is similar to a warranty for an automobile. If the care does not meet consumer expectation after a defined number of visits, then a defined set of subsequent visits are free.) Without appropriate outcome measures, the likelihood will be that behavioral health care resources will be moved to primary care with increasing rapidity.

Report Cards

What Are Report Cards?

Like their academic counterparts, report cards for mental health and substance abuse services are intended to provide feedback on achievements and problems. At least three dimensions must be considered when discussing report cards: content, point of view, and intended audience.

> *Content:* Content refers to the topics that are addressed. In school, content would be the courses rated. Generally, report cards for behavioral health care services cover one or more of the following domains of care: access, appropriateness, cost, and outcome. The two most common dimensions covered are access and cost.
>
> *Point of view:* Point of view refers to the perspective taken. In school, the perspective is that of the teacher. In a behavioral service setting, the perspective might be that of the payer, managed care entity, provider, consumer, or family member. Most frequently, the point of view is that of the managed care entity.
>
> *Intended audience:* The intended audience can be both explicit and implicit. In schools, the explicit audience of a report card is the parent; an implicit audience might be a future employer. In behavioral service settings, the explicit audience could be the payer, managed care entity, provider, consumer, or family member. Most frequently, the explicit audience of a behavioral service report card is the payer; the implicit audience is frequently the media.

In most dialogues about behavioral service report cards, domains are discussed, while point of view and intended audience are ignored.

What Work Is Currently Under Way?

In 1994, CMHS convened key mental health policy leaders at the Carter Center in Atlanta, GA, to ask them whether CMHS and the MHSIP should undertake the development of a report card for the mental health field; and if so, what point of view should be taken. The group responded with a strong affirmation that development effort should be undertaken and that the point of view should be that of the consumer. Subsequently, a task force of technical persons and consumers met on several occasions over about a 1-year period to develop the prototype. This prototype was released to the field at a public meeting in April 1996. Later in 1996, CMHS awarded 20 grants to States to begin a pilot test of the report card. In 1997 and 1998, the number of State grants was increased to 40.

The MHSIP report card covers the domains of access, appropriateness, prevention, and outcome. The point of view is that of the consumer; the explicit audience is the health care plan, and the implicit audiences are consumers and family members.

The report card consists of two components: administrative data and a consumer survey. The logic is that the administrative data will be drawn from the health plans' information systems, while consumer survey information will be collected during care and after the conclusion of an episode of care. Because the report card is consumer oriented, a major consideration in implementation is to have consumers collect and process report card data. Such report card data also could be supplemented by focus groups of consumers who could aid in interpreting the results.

In the winter of 2001–2002, the MHSIP program will undertake a revision of the report card to incorporate findings that have emerged from the field through the 40 State grants, as well as from other applications being tested. The second generation of the report card will be simplified and more user-friendly.

What Does the Future Hold?

Report cards will be a vehicle not only for displaying outcomes but also for showing contributions to the community (e.g., population prevention activities) more generally. Hence, future report cards will need to address not only service delivery questions, but also population questions. CMHS currently is working on the development of a population-based report card. Results from this project should become available in about six months.

Performance Indicators

What Are Performance Indicators?

Factors, both internal and external to the field, have led to major initiatives to develop system performance indicators. Generally, these performance indicators are designed for large-scale systems and operations. Such large-scale systems can be States, corporations, or national efforts around a particular issue. The point of view can be a legislature, corporate stockholders, the U.S. Congress, or other mental health or substance abuse communities. Indicators selected will depend on the point of view.

External factors influencing the development of performance indicators include efforts to make government accountable, such as the GPRA. This Federal legislation requires that each Federal program have performance indiçators in place by fiscal year 1999. Some States, such as Texas, have similar systems. Internal factors related to development of performance indicators for behavioral health care include declining available resources as discussed above, the transformation of Block Grants into Performance Partnerships, and the call for more accountability from all parts of the field, principally from consumers and family members.

Much of the work on performance indicators in behavioral health care can trace its intellectual lineage to the *MHSIP Consumer-Oriented Mental Health Report Card* (MHSIP, 1996). This report card measures four domains: access, appropriateness, outcomes, and prevention. These domains have provided the initial framework of the National Association of State Mental Health Program Directors Framework for Performance Indicators (NASMHPD, 1998). Likewise, they have provided the initial framework for the indicators developed by the American College of Mental Health Administration (ACMHA, 1997), as well as the work of the National Association of Psychiatric Health Systems and the Association of Behavioral Group Practices. In each of the latter three instances, additional domains have been added. For example, the NASMHPD President's Task Force on Performance Indicators added a Structure and Management Domain.

Initially, the CMHS work on performance indicators involved a Five-State Feasibility Study testing 28 performance indicators over a 9-month period. Five State mental health agencies collected the data and reported on 28 selected indicators in 1998. These indicators are shown in Table 2. Because the initial work showed that it was possible to collect and report on those indicators, CMHS undertook a larger project late in 1998 with 16 States. Input for this pilot project derives from the initial Five-State Feasibility Study and from the NASMHPD President's Task Force. The net effect is that the pilot project will test 34 indicators, rather than the original 28, although almost all of the original 28 indicators have been included. The performance indicator project is slated for completion at the end of fiscal year 2001.

In 1998, CMHS funded a Benchmarking Indicators Survey for the National Association of Psychiatric Healthcare Systems (NAPHS) and the Association of Behavioral Group Practices (ABGP). The purpose of this study was to identify a set of performance measures being widely used in behavioral health care settings and determine their feasibility for national implementation. The study consisted of a series of meetings, a literature review, and a mail survey. The domains of measurement included health status, client perception of care, coordination

Table 2: Five-State Feasibility Study of mental health performance indicators results

Performance Indicator	Number States Able to	Median Score	States Used Similar Definitions
Outcomes			
Percent of consumers reporting improved outcomes from services	***	65%	Yes
Improvement of functioning: closed cases	**	30%	No
Improvement of functioning: open cases maintained or improved	***	84%	No
Reduction in symptoms: closed cases	**	42%	No
Reduction of symptoms: open cases maintained or improved	**	87%	No
Improvement in school behavior	**	32%	No
Percent employed	****	15%	Yes
Percent living independently	*****	79%	No
Percent homeless	*****	3%	Yes
Criminal justice involvement	***	10%	No
Appropriateness/quality			
Percent of consumers agreeing services were appropriate	***	74%	Yes
Percent contacted within 7 days of discharge	***	54%	Yes
Percent receiving Assertive Community Treatment	***	5%	Yes
Percent receiving supported housing	*****	3%	No
Percent receiving supported employment	*****	2%	No
Percent receiving case management	****	51%	Yes
Use of restraints: episodes per 1,000 patient days	*****	9.2	Yes
Use of seclusion: episodes per 1,000 patient days	*****	6.2	Yes
Percent readmitted within 30 days	*****	9%	Yes
Percent involuntarily admitted—civil commitment	*****	75%	Yes
Percent involuntarily admitted—criminal commitment	*****	7%	Yes
Percent receiving atypical medications in State hospitals	****	53%	Yes
Percent receiving atypical medications in community	*	26%	Yes
Access			
Percent of consumers reporting satisfaction with access to services	***	77%	Yes
Rate of mental health service utilization per 100,000 population	*****	1,580	Yes
Percent of clients using community services	*****	96%	Yes
Structure/plan management			
Percent of budget spent on community mental health services	*****	59%	Yes
Per capita expenditures for community mental health	*****	$30.47	Yes

Source: National Association of State Mental Health Program Directors, 1998.

of care, clinical performance, family involvement in child and adolescent treatment planning, and peer review.

Among other findings, the results of the survey (Dewan, Bramlage, Behle, & Dillion, 1999) indicate that all levels of care measure performance in multidimensional categories; measures of clinical performance and perception of care are most commonly used; for most measures, definitions were consistent across facilities.

What Does the Future Hold?

Both the public and private sector work that is under way to develop common performance indicators has great potential. The prognosis is good for the future because of the positive collaborative relationship that has developed around these endeavors. In the future, we expect that such systems will be operated through Web-based technology with both plan and geographic-based reports available.

Conclusion

The day of quality tools has arrived. Clearly, practice guidelines, outcome measures, report cards, and performance indicators all will be part of our quality landscape for the foreseeable future. The trick will be incorporating them into ongoing clinical and management decision processes so that both efficiency and effectiveness are improved over time. We need to reiterate the importance of quality tools in the debate about future financial resources. Too much cannot be said about the importance of accountability for effective contract negotiation with major payers.

Continuous quality improvement is the theme that will tie together practice guidelines, outcome measurement, report cards, and performance indicators. Hence, one also expects considerably more emphasis on quality improvement within operational programs in the future.

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Section 3: Status of Mental Health Services at the Millennium

Chapter 7

Mental Health Policy at the Millennium: Challenges and Opportunities

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Background

The past 50 years have been an extraordinary time for mental health. There have been significant improvements in treatment, public attitudes, and services organization, and enormous growth in mental health insurance coverage, treatment resources, episodes of care, and research of all kinds (Mechanic, 1999). Systems of care have been transformed from largely psychotherapy for the affluent and custodial institutional care for all others to a range of outpatient services, inpatient care in various settings, residential care, and housing alternatives. Mental health care provision, once almost exclusively an activity of State government or fee-for-service private practice, has become an integrated component of health care funded through private and public insurance programs and grants, and appropriations from State, Federal, and local government. State governments that ran most mental health facilities have now substantially reduced their direct role and increasingly are purchasers of care provided by private sector organizations and professionals.

The change now transforming mental health care is the rapid introduction and growth of managed behavioral health care and the numerous ways it is shaping the provision of mental health services and the work of mental health professionals. Managed behavioral health care is very much a work in progress and its ultimate outcomes remain unclear. It offers considerable potential to better organize and rationalize services, and bring to them a more evidence-based culture, but it also presents risks, threatening innovation and appropriate provision of care. These risks seem particularly large for persons with severe and persistent mental illnesses who are more difficult to treat and who may lose ground with the "democratization of care" that occurs under managed behavioral health care (Mechanic & McAlpine, 1999).

In beginning a new century, it is important to look back at both the gains and the unanticipated consequences of mental health policy, and the implications they have for what lies ahead. Health organization and policy never arise anew. They evolve from prior culture and understandings, health care arrangements, health professional organizations, and political and economic processes. Mental health has been shaped as much by cultural changes and major social policies designed with other populations in mind as by the efforts of persons working in the mental health field itself. These changes and policies include the broader economic, political, and legal ideologies and influences that supported deinstitutionalization of persons with mental illness and those with other types of disabilities; the introduction of major national health insurance programs such as Medicaid and Medicare, which stimulated the development of new facilities, professionals, and incentives; and Social Security Disability Insurance and Supplemental Security Income (SSI), which facilitated community residence and subsistence. In the past several decades, there were advances in drugs and other technologies, in ways of managing patients within community programs, and in increased consumer involvement and public acceptance. Taking advantage of these changes, however, requires an appropriate institutional framework for financing, organization, and delivery, which are highly dependent on macro social policy.

As we proceed into a new century, mental health policy and services remain areas with considerable controversy. There have been significant research advances and improvements in treatment, but experts continue to disagree on the nature of mental illness and what dysfunctions are diseases in a medical sense and which are extensions of normal distress. The longstanding debate on the extent to which mental disorders are discrete categorical conditions or part of a broad continuum also persists. Underlying differences in perspective then link to philosophical and public policy questions such as the degree to which persons with mental disorders should be held responsible for their behavior and the tradeoffs between coercion and liberty in decisions about involuntary treatment. These perspectives also affect broader public reactions such as stigmatization and discrimination against persons with mental illness and the willingness of the public to support the necessary investments to close the gaps between unmet need and treatment.

This chapter is organized around six areas: deinstitutionalization; improved treatment technologies; the larger societal context and debates concerning parity; the legal context; managed behavioral health care; and the growth of consumer involvement. In each case, tensions are evident in seeking the appropriate balance among contending interests, philosophies, and research perspectives. For each major point, there are counterpoints reflecting the continuing struggle over defining the appropriate domains of mental disorder and the distribution of responsibilities among the Federal Government, State and local governments, the nonprofit and private sectors, the helping professions, and persons with mental illness and their families.

Deinstitutionalization

The most enduring change in the post–World War II period has been the deinstitutionalization of persons with mental illness (Grob, 1994), a trend now continuing under managed care arrangements (Mechanic, 1998a). Many factors contributed to this movement including social ideologies, the introduction of new drugs, changing social attitudes toward persons with mental illness and toward institutional care, the desire to reduce State government expenditures, litigation on behalf of persons with mental illness, and public welfare programs that made it possible to house and provide income support and other services to clients with disabilities in the community (Mechanic, 1999). Managed care maintains the deinstitutionalization trend, continuing to reduce inpatient care. It is potentially an instrument to better allocate care; but, in managing costs, it also reduces expenditures for purchasers and allows profits for private companies and their stockholders, thus reducing the funding available for direct service provision.

Public mental hospitals have been reduced or downsized from 560,000 resident patients in 1955 to fewer than 60,000 clients today, despite sizable population growth. Most acute inpatient care is now in general hospitals; and although case-mix and comorbidity are more complex, average length of stay has fallen steadily to less than 10 days, and continues to fall. In the period 1988 to 1994, some 12.5 million days were reduced in mental hospital care with only small compensation in days of care in the general hospital sector (Mechanic, McAlpine, & Olfson, 1998). The introduction of managed care in the private sector has reduced expenditures of some large corporate purchasers by as much as 30–40 percent, with most of these reductions achieved by large reductions in average length of stay (Feldman, 1998; Mechanic & McAlpine, 1999).

There is much debate on the consequences of such changes with allegations that care has significantly deteriorated, that patients are being discharged from hospitals "quicker and sicker," and that persons floridly ill are discharged to homelessness, neglect, victimization, and violent encounters (Isaac & Armat, 1990). Problems in care are common and are attributable to the deficiency of community services and the difficult task of providing the supervision and care available in hospitals, particularly to uncooperative clients, in dispersed settings in the community. Undesirable outcomes are inevitable when supervision is relaxed for high-risk patient populations. There are many deficiencies in access to and the comprehensiveness of community care, but allegations concerning the failures of deinstitutionalization ignore the large social and human costs of alternative policies (Mechanic, 1999). The traditional custodial mental hospital ruined many lives. But many communities, even now, have yet to develop the networks of community services essential to an effective system of deinstitutionalized care. Nevertheless, the evidence is overwhelming that most clients are immeasurably better off in the deinstitutionalized care system than they ever could be in mental hospitals. It remains less clear, however, whether reduced hospitalization has been too extensive and is now introducing unacceptable risks to persons with complex mental health needs.

One significant criticism of the extent of deinstitutionalization is that it has contributed to "criminalization" of persons with mental illness. The extent of such criminalization is difficult to assess because of increased inclusion of deviant behavior within psychiatric categories and particularly the inclusion of substance abuse and antisocial behavior. Arrests commonly involve such behavior (Hiday, 1999). The jail and prison population has grown substantially and now includes many persons who have *Diagnostic and Statistical Manual* (DSM) disorders, but it is difficult to determine how large a change this is from prior periods when such disorders were not recognized or defined as such. Nevertheless, the freedom of community life, the fragmentation of service systems, easy availability and use of substances, and the unavailability of hospital beds for other than short-term acute care make it inevitable that many persons with serious mental illness in the community will, at some time, face arrest.

A Justice Department study estimated that in midyear 1998, there were more than 280,000 persons with mental illness in jails and prisons, and more than a half million more on probation (Ditton, 1999). Although the methods used to assess and count mental illnesses were crude, the findings suggest the magnitude of the problem. Many of the violations committed for which people were incarcerated occurred under the influence of alcohol and drugs, and persons with substance abuse comorbidities are involved disproportionately in instances of violent behavior (Steadman et al., 1998). The substantially increased pattern of substance use and abuse associated with severe mental illness in the community poses serious treatment and management problems. Also, persons with mental illness in prisons have more difficulty with prison life and are more likely to get into fights and commit other rule violations (Ditton, 1999).

Some persons with mental illness have committed serious and violent crimes and require secure detention. But many are in jails and prisons by virtue of community neglect and lack of appropriate treatment. Others have repeatedly committed nuisance offenses and are jailed only for short periods, sometimes as "compassionate arrests" to get them off the streets and out of dangerous situations. Nevertheless, the criminalization of their behavior reinforces stigmatization that is already a barrier to community support and care, and complicates relationships with family, caretakers, and the community.

As we begin a new century, the decriminalization of mental illness and provision of a safe and appropriate environment for those who must remain in detention will have to be addressed more intensively. Avoiding criminalization will require aggressive and effective community care services and diversion programs that appropriately reroute patients into mental health systems of care. Improved mental health services in jails and prisons also are needed. Collaboration between the mental health and criminal justice systems always has been difficult and the complications of managed care contracting will not make it easier. Different cultures and priorities impose barriers to effective communication and collaboration.

The fundamental challenge is to fulfill the promises of deinstitutionalization policies faithfully by developing well-organized and balanced systems of community care with a broad spectrum of services and clear focus of responsibility and accountability. Such services must include assertive case management; sophisticated medication management; attention to housing, work, and needed social supports; substance abuse education and treatment; and many more. After several decades, we are finally seeing more States and localities developing assertive community treatment teams for those with more serious and persistent conditions. Managed behavioral health care was believed to have the incentives to create more balanced systems of care within a deinstitutionalized system, but this potential is yet to be demonstrated (Mechanic, 1998b; Mechanic & McAlpine, 1999).

Improving Treatment Technologies

A second major change in the later decades of the past century was the introduction of new approaches to investigate the scientific bases of mental illness and the application of tools from molecular biology, genetics, behavioral science, epidemiology, and health services research (U.S. Department of Health and Human Services, 1999). New imaging technologies have made it possible to directly track changes in the brain and to potentially use such observations for specific targeting of drugs. Although the payoffs from this sophisticated scientific infrastructure development are yet to be realized, the scientific advances set the stage for substantially improved understanding and treatment in the new century.

The scientific approach to mental illness has become more sophisticated and rigorous and the standards for evidence have been elevated. After many decades of psychoanalytic dominance and facile theorizing, research models and standards for evidence have tightened significantly. Psychiatry as a profession has moved closer to medicine, investigation has accelerated on the biological dimensions of psychiatric disorders, and research collaboration among disciplines in psychiatry and the behavioral sciences is more common. Randomized controlled trials have become the gold standard in evaluating interventions and there is a greater focus on evidence-based practice.

There has also been growing realization that research results obtained under highly controlled conditions in research centers with carefully selected patients cannot necessarily be generalized to the unwieldy patterns of practice in the community. There now is increased attention to the gap between efficacy studies and effectiveness of practice. Moreover, health services research studies show significant failures to provide the treatments that are best supported by research evidence (Lehman & Steinwachs, 1998; Wells, Sturm, Sherbourne, & Meredith, 1996), and it is inevitable that overcoming barriers and developing strategies for dissemination and implementation will be high on our agenda in the coming decades.

Although we have yet to have fundamental advances in drug therapy, the medications now available for treatment of schizophrenia, depression, and other major mental illnesses have improved. Newer drugs such as selective serotonin reuptake inhibitors (SSRIs) and atypical antipsychotics appear generally to be no more efficacious than earlier medications, but they have fewer side effects and are tolerated more easily, facilitating medication adherence and improved outcomes. The unwillingness of many persons with serious mental illness to continue on their medications constitutes one of the most serious obstacles to effective management and will continue to be a major focus of attention in treatment and research. The availability of a larger range of medications also facilitates treatment because patients have atypical and unpredictable responses to medications, and more options increases the probability of identifying compatible treatments. In schizophrenia, patients unresponsive to other drugs often respond remarkably well to clozapine, which has become an important backup treatment for patients who fail on the more commonly used medications. Although the thrust of pharmaceutical development and marketing has been on the specificity of drug action, there is ample evidence that many of the common medications affect a range of seemingly different disorders (Healy, 1997).

Mental health services research also has demonstrated the advantages of a variety of psychosocial management approaches from assertive community treatment to family psycho-education (Lehman & Steinwachs, 1998). These social technologies have been more difficult to disseminate than new medications, and services studies show that most patients who can benefit still do not receive such treatment (Lehman & Steinwachs, 1998; Young, Sullivan, Burnam, & Brook, 1998). Nevertheless, there has been growing appreciation of the importance of these management approaches and slow but increasing adoption. Assertive community treatment is accepted widely as the best available approach for managing severe and persistent illness in the community. We can anticipate more energy devoted to implementation and further study of the type and intensity of management that best fits varying client populations.

As we begin a new century, our hopes and expectations are high, but our understanding of the major mental illnesses is still limited. Our tools and approaches for studying these problems are improved, but history teaches us that it is easy to make claims of being on the threshold (Grob, 1998). A certain modesty is needed, as well as a willingness to be open to new conceptualizations, theories, methods, and approaches. The DSM is an important example. Developed as a descriptive convenience to help standardize scientific work and practice and to improve communication, DSM has been reified by many practitioners and decisionmakers in ways that are not constructive. Inconsistent with its own conceptual view of mental illness, and probably greatly overinclusive (Regier et al., 1998; Wakefield 1997, 1996), DSM is no more than a convenient instrument and should not be used as a standard to limit research on alternative approaches. It introduces and reinforces conceptions of greater specificity of mental disorders than can be validated empirically (Healy, 1997). The profusion of diagnostic entities probably partly explains the degree of comorbidity reported in most studies.

Views of mental illness and mental health policy have cycled widely over the years between biological and social conceptions, often exaggerated at both extremes. This cycling occasionally is useful as a strategy because it helps move a particular line of research forward. However, research on mental illness is served poorly by disciplinary parochialism. Most of the mental illnesses have to be understood in a multicausal context requiring consideration of biology, social structures, human development, and social processes. Science policy in the future should enable such cross-disciplinary fertilization and cooperation.

Given the many uncertainties that continue to characterize treatment of mental disorders, there is concern with the present focus on biological aspects and the preference of managed care for medication treatments over psychotherapy, counseling, or other modalities. Such direct approaches as interpersonal psychotherapy and rehabilitation approaches remain important as alternative treatments or as adjuncts to medication. They often are fundamental to facilitating greater personal comfort, improved social function, and higher quality of life.

Mental Illness and Mental Health Policy in a Societal Context

The prevalence of mental illness varies substantially among nations and among various social and cultural groups within countries, regions, and communities (Dohrenwend et al., 1992; Weissman et al., 1996). The occurrence of some mental illnesses, such as schizophrenia, is more invariant than most, but even rates of schizophrenia will vary substantially among some subgroups (Bhugra et al., 1997; Harrison et al., 1997). Some of the environmental contributors to some mental illnesses may include nutrition, birth practices, infections, and epidemics; but the causal factors and how they interact with genetic and other biological risk factors remain unknown. Major depression and substance abuse, two of the most common mental disorders, are very much influenced by social and cultural factors, and factors in individuals' lives and relationships (Brown & Harris, 1978; Horwitz & Scheid, 1999).

Socioeconomic status has one of the strongest associations with the prevalence of mental disorders (Dohrenwend et al., 1992; Eaton & Muntaner, 1999) as well as many physical conditions, but the causal pathways involved are complex, multidimensional, and incompletely understood (Amick, Levine, Tarlov, & Walsh, 1995; Dohrenwend et al., 1992; Link & Phelan, 1995; Wilkinson, 1996). Nevertheless, it is reasonably clear that social structures make their mark on the occurrence of psychiatric morbidity through class, culture, and gender. Although the relationship between social structure and mental illness has been observed for 100 years or more, there is now renewed interest in how social structures might be modified to reduce disability and improve health (Benzeval, Judge, & Whitehead, 1995). Although there is much research on contributory factors such as helplessness, fatalism, social support, coping, and the like (Horwitz & Scheid, 1999), it remains uncertain how such understanding can be translated usefully into efforts to improve mental health, especially in the case of the major mental illnesses. Yet, there are many good research leads that require further development (Mrazek & Haggerty, 1994).

The Uninsured, Undertreatment, and Unmet Need

More apparent is the continuing evidence that most persons with mental illness remain untreated (Kessler et al., 1994; McAlpine & Mechanic, 2000), that those who are treated often receive inappropriate and incorrect treatment (Wells et al., 1996; Lehman & Steinwachs, 1998), and that mental disorders remain highly stigmatized and neglected. Social policies have a major role in making treatment available. Persons with serious and persistent mental illness remain perhaps the most disadvantaged and neglected group in our society and suffer from the failures of American health care policy. The United States remains the only major nation in the world without universal health insurance. In the past decade, despite a growing and highly successful economy, the number of uninsured persons has grown (Kronick & Gilmer, 1999). Persons with serious mental illness are disproportionately uninsured (McAlpine & Mechanic, 2000). Many others with health insurance have only very limited coverage for mental health and substance abuse services, which typically are not available on the same basis as other types of care and limited by more deductibles, coinsurance, and caps (Buck, Teich, Umland, & Stein, 1999; Mechanic & McAlpine, 1999).

The Parity Issue

In recent years there has been growing interest in parity of mental health with other medical services. Legislative efforts have been made at both State and Federal levels, but the concept of parity varies from one context to another and the level of legislative intervention varies a great deal as well. The underlying idea of parity is that the same range and comprehensiveness of insurance benefits available for other illnesses should apply as well to persons with mental illness and substance abuse problems. There is a growing political constituency for parity among influential consumer groups and some politicians, and we are likely to see continuing efforts in the future. A major concern to policymakers has been the cost of parity, since research indicates that some mental health services (particularly psychotherapy) are more responsive to insurance coverage than other types of medical services (Frank & McGuire, 1986; McGuire, 1981). Parity in a managed care context is more palatable because cost can be held readily in check through managed care strategies and the additional premium costs required for more complete mental health coverage appear to be modest (Goldman, McCulloch, & Sturm, 1998; Sturm, 1997). Moreover, some influential consumer groups like the National Alliance for the Mentally Ill (NAMI) would restrict the application of parity to the major mental illnesses, conditions they refer to as diseases of the brain.

Nevertheless, there are serious issues with the application of the parity concept, particularly as it affects persons with serious and persistent mental illness, and numerous issues remain unresolved. First, managed care purports to provide "all necessary services" (Mechanic, 1998a), but many of the services required by persons with serious mental illness are excluded from "medical necessity" definitions. Indeed, more than half the expenditures required for persons in the community with severe mental illness are usually not covered by conventional health insurance (Hollingsworth & Sweeney, 1997). Thus, benefit designs cannot depend on vague definitions of medical necessity and need to be clearly specified. This may involve services not typically problematic in the treatment of persons with physical illness, such as assistance in becoming adequately housed. It should be noted, however, that many of these sociomedical services become more commonly needed with population aging and the management of chronic disease and disability.

Second, because standards of mental health care are less clear than for surgical and medical treatment, such care seems to be managed in a more rigorous way with much larger reductions of treatment requested by physicians (Mechanic & McAlpine, 1999; Wickizer & Lessler, 1998). Moreover, there is evidence that while the management process seems to provide a nominal mental health service to more people than typically found in fee-for-service practice, those with the greatest need and disadvantage receive less intense services. Decision processes seem not sufficiently sensitive to the seriousness and complexity of illness, and patients with the most severe illnesses appear to do less well under present management arrangements as compared to fee-for-service practice (Mechanic, 1998b, 1999). Inclusion of parity for mental health services within a "medical necessity" definition has no real meaning if services are not reasonably accessible, appropriate, and of high quality (Mechanic & McAlpine, 1999). There is still a great deal to learn about these management processes and their relationship to quality of care. Good evidence on the effects of managed care on the severely and persistently ill population is difficult to obtain because varied outcomes have to be assessed over reasonably long periods and few studies do this.

The Difficulty of Establishing Boundaries for Mental Health Coverage

Many policymakers, while sympathetic to the idea that persons with mental illness should have access to treatment comparable to those with other types of disorders, worry about opening the floodgates to increased utilization and costs. The appeal of managed care and the idea of using a "medical necessity" definition is that tight controls are in place to manage potential overutilization. We now have a large number of clinicians from many disciplines and professions prepared to offer reimbursed services for persons with mental illness. It is well established that a major determinant of utilization and costs is the supply of reimbursable services available and, thus, without some form of gatekeeping, utilization could expand in irrational and costly ways. There are a number of alternative solutions. One form of control is to have different levels of cost-sharing depending on the service and the extent of moral hazard. Thus, services like diagnostic assessment, medication management, and inpatient care may have lower cost-sharing than psychotherapy, a service that often is attractive to persons with lesser disorders, for existential and self-realization reasons. This approach is unpopular with such professions as psychology and social work, which provide much of the psychotherapy.

A common approach, based on the notion that persons with more severe conditions should receive priority, is to restrict the definition of conditions covered by the parity concept to several of the major mental disorders such as schizophrenia, major depression, and bipolar disorders. These are typically referred to by proponents as "diseases of the brain" and distinguished from other disorders which presumably are not. This distinction, while practical, may be both too inclusive and too exclusive. It is unclear that all of the more serious disorders usually suggested for coverage are "disease of the brain" except in the trivial sense that all behavior is mediated by the brain. Nor is it evident that some seemingly less serious conditions are not. Many conditions that would be excluded under these suggested definitions are painful and seriously interfere with function. Many may, indeed, offer opportunities for improved outcomes that are comparable or better than outcomes achieved in the case of the most serious mental illnesses (Mrazek & Haggerty, 1994). As we look toward a fairer system of health insurance, we require the application of tools that allow us to assess the cost-effectiveness of alternative interventions, while remaining sensitive to other community values as well (Ubel, 2000).

The Legal Context of Mental Health Services

In the 1970's, legal activists in mental health almost "made a revolution" (Appelbaum, 1994) around a range of issues including right to treatment, right to refuse treatment, involuntary commitment, and least restrictive alternatives, among others. After a flurry of turmoil, disputes abated and these contentious matters reached a certain equilibrium. A variety of new legal issues of large import are now emerging and are likely to have an important impact on future mental health services.

One new potential instrument is the Americans with Disabilities Act (ADA) and the U.S. Supreme Court decision in *Olmstead* vs. *L.C.* which required the State of Georgia to provide community care to persons with mental illnesses and mental retardation who could function in such less restrictive settings without placing an undue burden on the State or requiring that the State establish a particular type of program. The decision was sufficiently qualified to be uncertain about its ultimate reach, but the ADA adds an additional instrument through which persons with mental illness and their advocates can challenge arrangements and programs that limit their opportunity for fuller community participation. Lawyers representing persons with mental illness also are using ADA to challenge discrimination in health insurance (Moss, Ullman, Starrett, Burris, & Johnsen, 1999).

The litigation of earlier decades was focused on increasing the rights of persons with mental illness and reducing coercive controls. Current legal approaches, in contrast, are more focused on developing mechanisms that support deinstitutionalization by imposing more controls on living in the community. Outpatient commitment or other conditions for remaining in the community are more common today, despite difficult legal dilemmas, as a way of inducing patients who are at risk to maintain contact with treatment programs and to take their medications (Torrey & Kaplan, 1995). Here, the threat of hospitalization may be a significant deterrent to noncooperation, although the legal basis for imposing limits on freedom in the community is more debatable and contested. A recent study of outpatient commitment in New York found that outpatient commitment had some success in reducing subsequent hospital readmissions, but the effects were explained by the intensity of service provision (Swartz et al., 1999). The effects, thus, came not from the legal intervention itself but from the fact that the intervention was linked to providing more services to clients. The underlying issue is the quality and intensity of the services available to clients in the community.

The Challenges of Managed Behavioral Health Care

About three-quarters of Americans with health insurance are now under some form of managed behavioral health program. Although there are complaints about managed behavioral health care, particularly with respect to access to specialty services, and intensity of care, the industry has demonstrated its capacity to reduce private sector costs considerably without much evidence of impairing care (Mechanic, 1999). One of the advantages of behavioral health care carve-out arrangements is that they tend to give more people access to at least some specialty mental health services than occurs under the fee-for-service system. Intensity of care is much reduced, however, particularly regarding inpatient services and extensive psychotherapy (Mechanic, 1998b; Mechanic & McAlpine, 1999).

A significant limitation of carve-outs is the lack of coordination between mental health and substance abuse services, and other medical services. Even mental health and substance abuse may be separately carved out with prescriptions involving still another carve-out. The fragmentation of care and boundary problems that occur can be substantial; but, thus far, there is little evidence that integrated care is a high priority. The ideal of integrated care is widely endorsed, but, with current pressures on clinicians, the realities of high-quality integrated care are challenging. Despite several decades of effort in attempting to make primary care clinicians more receptive to and skilled at providing mental health services, their performance in recognizing and treating psychiatric illness remains limited (Mechanic, 1997; Wells et al., 1996). Carve-outs, whatever their limitations, organize providers of care who are interested in behavioral health problems and experienced in managing them.

One significant advantage of managed behavioral health care is the opportunity to introduce practice standards and guidelines in a systematic way. Studies of quality care repeatedly indicate poor performance as measured by the scientific evidence about appropriate treatment of even such major conditions as schizophrenia and major depression. Managed behavioral health care has the potential to bring practice more in line with the evidence base. If managed behavioral health care was working successfully, we would expect a close relationship between intensity of care and severity of illness and disability, and evidence of substitution of care when more intensive treatments are reduced. Unfortunately, there is little evidence in support of these expectations (Mechanic & McAlpine, 1999).

The role of managed behavioral health care for populations of those more severely and persistently ill is problematic and uncertain in the future. The idea of managing care is hardly new for this population—it typically has been served by public programs with scarce resources and the need to make allocations carefully. Over several decades, mental health professionals and administrators in the public sector in many States developed a broad community support structure that fit the wide range of needs of persons with serious mental illnesses in the community. To the extent that States shift this responsibility to private managed care companies, which have little experience managing the needs of such highly disadvantaged populations, the outcomes become more uncertain. States have had varying experiences with managed care for persons with serious mental illness; but it is not clear that the private sector has an appropriate infrastructure in place for such care and, if it does, whether it can profit from providing such management. There are some indications that managed behavioral health care companies are backing off public contracts for the psychiatrically disabled population, and States, too, are being cautious.

Managed care is a work in progress, and patterns of management change fairly quickly. Thus, it is difficult to know how this sector will evolve, what adaptations it will make as it gains experience, or whether it will survive in its present forms. Managed care in the general medical sphere has been highly adaptive in response to public criticism, and has increased access to specialty care and made other changes consistent with consumer concerns. It has sought to reduce tensions resulting from utilization management by shifting risk to provider groups so that utilization review could be relaxed. There has been little such transfer of risk in behavioral health and little confidence that provider groups would know how to manage such risk. Thus, almost all reductions of cost have come from reduced inpatient care and negotiated reductions in rates. With increased competition, capitation payments have been driven to levels that make one skeptical that an appropriate pattern of care can be maintained, particularly after administrative costs and profits are extracted from the system of care.

The Growth of Consumer Involvement

One of the remarkable changes in mental health services has been the increasing involvement of consumer groups that play an important advocacy and political role, and that have developed a wide range of self-help and informal care services (Kaufmann, 1999). Many of the consumer services are consumer-run or administered by professionals committed to an empowerment philosophy that regards consumers as members rather than clients. These various groups may have different philosophies and ideologies, view mental health differently, have different treatment preferences, and often compete in their advocacy. Both the Federal and State governments have worked with these advocacy and consumer groups and have supported their development. The informal and self-help sectors are a very significant component of the system of mental health services (Kessler et al., 1999).

The National Mental Health Association (NMHA) dates back to Clifford Beers and the mental hygiene movement early in the century. NAMI—an organization less than 25 years old—has also become a highly influential mental health advocacy group. NAMI's membership of about 210,000 includes persons with mental illness and their family members. The organization has built a powerful State and Federal constituency that lobbies extensively; partners with professionals, researchers, and advocates; carries out extensive communications and educational programs; and sponsors its own research program. While NAMI's membership is diverse, the organization strongly endorses a focus on the most serious mental disorders. NAMI's political agenda is to support biomedical and health services research funding, parity in health care coverage, and improved care for persons with mental illness. NAMI has formed strategic alliances with members of Congress and the Executive branch and with many key policymakers in the States. As a federation of local organizations, NAMI provides support to its local AMIs who in many States are quite effective in promoting legislative initiatives.

NAMI is sometimes at odds with other mental health organizations and groups that favor different priorities. Although NAMI, at times, has been highly critical of mental health professionals, it opposes groups who reject the idea of mental illnesses as diseases and who reject medication. NAMI supports the use of civil commitment and more forceful interventions in opposition to liberty advocates. NAMI also sometimes comes into conflict with NMHA on the range of conditions to be included in mental health legislation and on the priority the NMHA gives to preventive efforts and public education. In the inevitable conflicts between persons with mental illnesses and their families, NAMI generally advocates for families and for means of reducing their burden in caring for a relative with mental illness.

The empowerment philosophy advocated by clubhouses such as Foundation House and by consumer-administered self-help programs and drop-in centers also sometimes comes into conflict with NAMI philosophy. There is no single viewpoint that pervades these programs, and clubhouses modeled after Fountain House may be quite different from one another or consumer-run services. But in some instances members adopt an antipsychiatry and antimedication view. They also commonly side with members in conflict with families. We know little definitively about the value of mental health consumer-run services, but both theory and research suggest that empowerment can be a powerful influence on how clients view themselves and their quality of life (Rosenfield, 1992).

The best known of all self-help efforts is Alcoholics Anonymous (AA) and its 12-step program. Twelve-step programs are now widely used in formal treatment settings as well as by community groups. With the increasing use of alcohol and drugs, "double trouble" groups appear to be growing. They offer persons with mental illness a more supportive environment for maintaining their medications than traditional AA groups. One significant problem in behavioral health advocacy is the conflict among groups advocating for attention for different disorders such as mental illness, alcoholism, substance use disorder, and developmental disabilities. The lack of more united advocacy limits mental health efforts relative to other important disease advocacy organizations.

A New Century

Much is uncertain about the future of mental health services. A few observations are quite firm, however. First, although there is much wishful thinking and rhetoric about advances, there remains a great deal we do not know. Many mental disorders remain intractable, and treatment is still often on a hit-or-miss basis. How soon advances in neuroscience and molecular genetics will bring new and more effective treatments remains uncertain. Second, there is considerable evidence that the treatments we do have are not well distributed because of insurance limitations, public stigma, lack of patient choice, and professional ignorance. The failure to use our existing science base and research evidence must be high on the agenda as we begin this new century. The evidence is that we do much better at disseminating new drug treatments than behavioral programs, but even in the drug area, current practice is seriously deficient.

Again, it is important to understand that the future of mental health treatment is as likely to depend on policy decisions outside the mental health sector as within it. Perhaps most important is whether our Nation can move to a system of universal access to care and whether the benefit design covers those services that we know are invaluable for persons with serious mental disorders. Such community care will also depend on the strength of public social supports such as those dealing with income maintenance, housing, work rehabilitation, and the like. It will also depend on community attitudes, feelings of safety, and levels of tolerance.

In the past several decades, American society has changed dramatically in its view of persons with disabilities. These individuals now participate in all aspects of community life. The passage and implementation of the ADA reinforce these changes and break new ground for further advances for full participation. Prominent individuals who have struggled with mental illnesses, including authors, politicians, celebrities, sports figures, and others, are now more likely to publicly acknowledge and discuss what were previously deeply held secrets. Many more people are now willing to seek treatment, and mental health care is more respectable among general physicians. Nevertheless, mental illness remains stigmatized and discrediting, and public perceptions still remain punitive relative to other disabling conditions. This is particularly true of persons with psychoses and those with substance abuse disorders. In the latter case, provision of treatment is particularly inadequate, with long waiting lists for access to treatment and punitive official policies. Persons with substance disorders are commonly seen as the "undeserving sick" in the public eye (Mechanic, 1999).

Study of history tells us that social policy does not progress in a linear fashion and often moves in cycles of advance and retrogression. Thus, it is impossible to foresee how the tensions relating to the identification and treatment of persons with mental illness may play out in the future. Few observers anticipated that 40 years after implementing an ideological victory to replace custodial mental health care with a community public health approach, we would have to address the problem of hundreds of thousands of persons with mental illness in jails, in prisons, or on probation and the large numbers of homeless persons with mental illness seen on the streets of all our large cities. Yet, the vast majority of persons with mental illnesses today lead better lives, get more effective treatment, and are less stigmatized than in the past. Effective treatment of mental illness in future decades will depend on advances in knowledge and technology, and on the social and political factors that affect social policies in general and mental health policies in particular.

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Chapter 8

The Mental Health Economy and Mental Health Economics

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Introduction

The mental health economy in the year 2000 looks much more like the rest of the U.S. economy than it did in 1960 or even in 1980. Resource allocation of mental health care has been decentralized over the past 35 years. In the 1950's, roughly 75 percent of episodes of treatment were provided by public mental hospitals, whereas in the 1990's, less than a quarter of treatment episodes are provided by publicly owned mental hospitals. In the 1950's through the 1970's the mental health system operated as a planned economy. Today, markets for insurance, services, and even management of mental health systems are common features of mental health care delivery. The vast majority of people in the United States obtain their care for mental health problems from private providers that compete for customers. Their care is most often paid for by a public or privately funded health insurance plan (e.g., Medicaid, Medicare, or an employer-sponsored health maintenance organization [HMO]). Only a modest segment of treatment delivered in the year 2000 is directly paid for and provided by government-owned providers. Finally, in many States, administrative functions in the mental health delivery system have been delegated to private managed care organizations by State government, using competitive procurement methods.

Accompanying the dramatic structural changes in mental health care has been the emergence of a line of scholarship that applies economics to the problems of efficiently and effectively providing treatment for mental disorders. Research on economics and mental health has addressed a number of key mental health policy issues, including the design of insurance, methods for reimbursing providers, the use of incentive contracts in public mental health systems, the organization and financing of managed behavioral health care organizations, the cost-effectiveness of new mental health treatments, competition between mental health professionals, and equity in access to care for special populations.

In this chapter, we will review a number of important lessons that have been learned from applying economic analysis to a rapidly changing mental health delivery system. We will begin by briefly reviewing the transformation of the mental health system and then touching on four major lessons from research on economics and mental health.

The Transformation of the Mental Health Economy

As noted above, two of the most significant aspects of the transformed mental health economy have been the altered role of government and the emergence of private markets for mental health care.

The Role of the Public Sector

Rashi Fein (1958) estimated the direct costs of spending on mental health care in 1955 and 1956 to be approximately $1.14 billion. Government spent the vast majority of the money, 84 percent, on publicly owned providers. The other 16 percent of those funds was spent on private psychiatrists and private psychiatric hospitals. These figures highlight the fact that the mental health economy of the 1950's was largely centrally planned and did not use the market to allocate resources. It also shows the narrow range of providers and modalities in use at the time. McKusick and colleagues (1998) estimated that by 1996, $66.7 billion was being spent on mental health care. They also estimated that roughly 53 percent of that total spending originated from public sources. Clearly, the relative role of government as a payer for mental health care has been reduced. The nature of how government pays for care has also changed. For example, in Fein's analysis, about 15 percent of spending in 1956 came from private sources (insurance and out-of-pocket payments), 58 percent from State government, and the remaining 27 percent from the Federal government (largely through the Veterans Administration). Neither States nor the Federal government had any significant insurance programs paying for mental health care in the 1950's. Utilization patterns reflect the financing arrangements. Kramer (1977) estimated that 49 percent of all treatment episodes were provided by public psychiatric hospitals. An additional 5 percent of episodes were supplied by the Veterans Administration and 23 percent by outpatient psychiatric services, many of which were publicly owned and operated.

The enactment of the Amendments to the Social Security Act in 1965 created a major shift in financing and altered the method by which funds would be allocated to providers. Funds for mental health care of many poor and medically indigent people were linked to choices of providers made by patients for the first time. Thus, resource allocation began to rely on decisions made by patients, even if they were poor. No longer would centralized choices be the dominant factor in determining the flow of public funds to providers. McKusick and colleagues (1998) show that by 1996, 63 percent of public spending on mental health care originated from the insurance-like programs Medicare and Medicaid. The majority of public mental health care funds were allocated through market mechanisms by the 1990's.

During the 1980's and 1990's, there was also significant change in the methods used for allocating resources within the traditional segments of the public sector. Beginning in the 1980's, the Reagan Administration ushered in a new period of fiscal federalism. The division of labor and the financial relationships between levels of government were altered by Federal policy and reconsidered in many States. In the mental health area, categorical programs were consolidated into the so-called Alcohol, Drug Abuse, and Mental Health Block Grant. While this change involved relatively modest pools of funds, the change in the conceptual frame of policy was large. Freed to use funding in a more flexible manner, States began experimenting with "contracting out" to private organizations for mental health services and the use of incentive contracts within intergovernmental transfer arrangements (Frank & Gaynor, 1994b, 1995). States as diverse as Arkansas, California, Ohio, and Texas restructured the financial relationships with local community mental health programs and the State mental health authority. In most cases, the new financial arrangements served several purposes. First, they created incentives for local mental health programs to exercise care in making referrals to public mental hospitals by making them pay for State hospital services. Second, the new arrangements allowed dollars to follow patients to a greater degree than had been the case previously. Third, community programs typically realized greater flexibility in using State funds. Finally, localities often were forced to bear a larger share of the costs of providing public mental health care.

Finally, governments at all levels became increasingly reliant on privately owned organizations to supply mental health services to low-income individuals in need of treatment. This trend has frequently been referred to as privatization. The trend toward privatization has meant that government increasingly defined its role as payer and regulator and less as provider of services. This meant structuring arm's-length relationships between government and providers of care that increasingly took on features of market relations.

The Emergence of Private Markets: The Modern Mental Health System

The period 1965 to 1985 represented a time of rapid expansion of markets for mental health care. During this period individuals needing and seeking mental health care were increasingly placed in the role of the consumer. The diffusion of private insurance coverage for mental health care, along with the creation of Medicare and Medicaid, opened up the possibility of individuals exercising choice regarding the provider and setting in which they obtained treatment for a mental health problem (McGuire, 1981). The creation of Medicare and Medicaid in 1965 often enabled large numbers of low-income people with mental health care needs, whose previous treatment options would have been limited to State mental hospitals and public clinics, to choose from a number of private and publicly owned providers (Frank & Lave, in press). Medicaid in particular was designed in a manner similar to a voucher system, allowing consumers to choose among participating providers at no out-of-pocket cost.

Accompanying the new possibilities for consumers to exercise choice was a proliferation of providers seeking to supply services to people with mental health problems (President's Commission on Mental Health, 1978). As a result, in the year 2000 a great variety of organizations and professionals supply mental health services, and these are not limited to traditional providers of medical care. For example, in Massachusetts one could obtain office-based

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psychotherapy from any of the following licensed providers: primary care physicians, psychiatrists, psychologists, social workers, counselors, and nurses. Inpatient care is also provided by a number of different provider types. One could receive hospital-based care for a mental disorder in a medical-surgical ward of a general hospital, a general hospital psychiatric unit, a private psychiatric hospital, or a State mental hospital. In addition, there is a broad array of residential treatment facilities, partial hospital organizations, and psychosocial rehabilitation programs. In some cases the functions of these various professions and organizations are differentiated, while in others they offer services that appear to be close substitutes (Goldman & Skinner, 1989).

Psychiatrists and psychologists account for less than half of mental health professionals. There were about 33,500 psychiatrists and nearly 70,000 psychologists in 1995; social workers, counselors, and family therapists accounted for 94,000, 61,000, and 46,000 practitioners respectively. Individuals with higher incomes and private health insurance are most likely to receive mental health care from psychiatrists, psychologists, and social workers specializing in mental health care.

Most providers and professionals must compete for patients. That is, they must offer combinations of prices and quality of services that are attractive to buyers. In the presence of insurance, consumers do not face the full price, so the market functioning differs from the textbook market. Nevertheless, in 2000 managed care organizations establish networks and make patient referrals in part on the basis of price (in fact, many critics suggest that price is overemphasized). Thus, much of the work of allocating patients to providers has been delegated to markets. Data on spending and utilization patterns for mental health care (McKusick, Mark, King, Harwood, Buck, et al., 1998) reveal that the share of resources accounted for by providers not subject to market forces is quite modest. Veterans Administration Health Centers, State mental hospitals, and publicly owned and operated clinics typically do not compete in markets. We estimate that these organizations account for about 23 percent of inpatient and residential treatment and 20 percent of outpatient care. The implication is that the vast majority of mental health care is allocated via markets.

The treatment of mental illnesses evolved dramatically during the last half of the 20th century. This evolution is in part due to scientific advances in treatment technology such as pharmaceutical innovation (Berndt, Cockburn, et al., 1996), new methods of organizing elements of treatment (Stein & Test, 1980), and improved approaches to brief psychotherapy (USDHHS, 1999). Changes in the organization and financing of mental health services also have contributed to changing treatment patterns (Mechanic, 1989). In particular, limits on inpatient days and outpatient visits covered under public and private insurance plans, financial incentives to reduce hospital stays, and payment arrangements that reward health plans for reducing overall health care spending have contributed to shifts in the treatment of mental disorders (Harrow & Ellis, 1992). Various types of mental health services have been posited to be substitutes. Research based in HMOs and publicly funded treatment systems provides evidence that community-based outpatient treatments are substitutes in production for inpatient psychiatric care (Callahan, Shepard, Beinecke, Larson, & Cavanaugh, 1995; Weisbrod, 1983). Similarly, for psychotherapy services, outcomes evaluations suggest that a number of professions trained in psychotherapy produce comparable clinical gains to particular classes of patients (Knesper, 1989). There is also evidence suggesting that for certain illnesses pharmaceutical treatments can substitute (at least partially) for psychotherapy (Elkin et al., 1989; Kupfer et al., 1992).

Managed care has had an enormous influence on delivery of health services in the United States. The impact on mental health care has been especially profound. Employers, government, and other payers are insisting on paying less for health insurance and health services and obtaining more data on the performance of health plans. The result of this drive for greater value in purchasing has been the acceleration in the growth of managed care organizations. Preferred provider organizations (PPOs), point of service (POS) plans, and HMOs accounted for over 75 percent of the insured population in 1998. Public insurance programs have also sought to make use of managed care arrangements. Medicare and State Medicaid programs are experiencing growth in enrollment in health plans that assume financial risk and responsibility for managing health care.

In the mental health sector a new institution, the managed behavioral health care carve-out, has taken a central position in the delivery system with respect to Medicaid and private insurance plans. Traditionally, a purchaser, usually an employer, contracted with health plans to cover a full range of health risks and services. Health plans would manage the risk and organize professionals and hospitals to provide care. Purchasers and health plans in the year 2000 often choose to "carve-out" certain benefits, which means they separate the health insurance function by disease or service category and contract separately for the management of those risks.

There are two major forms of carve-outs found in the mental health sector. The first may be referred to as a payer carve-out and the second as a health plan subcontract carve-out. A payer carve-out is an arrangement whereby the payer contracts directly with specialty vendors to insure and manage some or all of the mental health benefit (a payer may separate mental health from all health plans it does business with or only a subset of plans). A health plan subcontract carve-out occurs when a health plan such as an HMO chooses to delegate risk and care management for mental health care to a specialty vendor.

Mental health carve-out contracts have been a growing feature of health insurance at the turn of the century. Roughly 35 percent of large employers (5,000 employees or more) and 3 percent of smaller employers (fewer than 500 employees) make use of payer carve-out contracts. Recent estimates suggest that more than 50 percent of health plans make use of subcontract carve-outs. The evidence to date shows clearly that managed behavioral health care carve-outs result in substantial reduction in specialty mental health spending (Frank & Lave, in press; Sturm et al., 1998). The evidence on the impact on total health care spending has been less well developed. Managed behavioral health care is the most recent development in the evolution of the mental health care marketplace.

What Has Been Learned About Economics and Mental Health?

The emergence of markets for mental health care and the central role they have come to play in allocating resources for mental health treatment has created opportunities for economic analysis to make contributions to the formulation of mental health policy. Since the late 1970's there has been an energetic and growing research program on economics and mental health. The emergence of markets for mental health care has made the nature of exchanges between payers, providers, and consumers objects of public policy. Moreover, the regulation of insurance markets and providers of care affects the terms of competition in markets for mental health care. These are issues that the tools of economic analysis are well suited to address. Economists have studied the design of insurance coverage for mental health care, methods of paying providers and health plans, incentives contained in intergovernmental transfers used to finance public mental health care, efficiency and fairness of insurance regulation, and the productivity of treatment for major mental disorders, among many other topics. Economic analysis has played a major role in debates over parity in insurance coverage, the design of Medicaid managed behavioral health care, the implementation of the prospective payment system, and the regulation of reimbursement for mental health professionals.

Over the past 25 years, important lessons have been learned from the application of economic analysis to the mental health sector. In the remainder of this section, we highlight four sets of lessons derived from the research program on economics and mental health. These are meant to be illustrative of the contribution of economics to mental health, not a comprehensive review.

Incentives Matter

The mental health sector existed as a planned economy for many years. The conceptual underpinnings to resource allocation policy had their foundation in health care planning. Financial incentives embedded in key institutions governing the terms of exchange between providers and consumers were not accorded much attention before the latter half of the 1970's. In fact, viewing people with mental health problems as consumers making choices in a market for mental health services was foreign to most concerned with mental health policy and repellent to many. When the terms of insurance coverage for mental health care were first debated in the 1950's and again in connection to Medicare and national health insurance, insurers claimed that the increased cost of the coverage for mental health care was too great. Insurers argued that mental health care should be treated differently in benefit design because the demand response to the incentives in insurance led to larger increases in service use for mental health than other types of medical care. This made the cost of risk spreading higher for mental health care than other types of services. Advocates for mental health care argued that the demand for mental health services was no more responsive to cost-sharing provisions than were other services.

The demand response to the terms of insurance coverage for mental health care thereby became a central issue in the earliest appearances of the "parity" debate (McGuire, 1981). A number of observational studies were undertaken to examine the demand response of ambulatory mental health care to cost-sharing in insurance. These studies all found larger demand responses to cost-sharing for mental health services than for other medical services. The observational nature of these studies meant that selection bias posed a threat to the validity of their results. The RAND Health Insurance Experiment (HIE) (Newhouse & Insurance Experiment Group, 1993) studied demand response in the context of a controlled experiment where individuals were randomly assigned to cost-sharing arrangements. The results from the HIE showed that the demand response to cost-sharing for ambulatory mental health services was roughly twice as large as for general ambulatory services. Hence in a fee-for-service-indemnity insurance context, the increases in spending were proportionately greater for mental health care than for other services. The results showed that response to the demand-side incentives in insurance needed to be taken into account in the formulation of efficient insurance designs for mental health care.

Financial incentives contained in payment systems affect the behavior of providers of care. Again, the idea that providers would respond to factors other than the clinical circumstances of their patients ran counter to much prevailing ideology. In 1983 the Federal government adopted a method of prospective payment for hospital care under the Medicare program. Inpatient psychiatric care was exempted from most of the initial implementation of Medicare's Prospective Payment System (PPS), largely because insufficient analysis had been conducted on psychiatric hospital stays.

A desire by Congress to consider the inclusion of psychiatric care within the PPS set off an active research effort on the behavior of providers of inpatient psychiatric care. A number of parallel research efforts made use of "natural experiments" in payment arrangements for inpatient psychiatric care (see Harrow & Ellis, 1992, for a review). Overall, the research consensus was that supply of inpatient psychiatric care, as measured by length of stay, was considerably more responsive to prospective payment than was hospital care for other types of patients. The greater response to payment incentives raised concerns that PPS might result in undertreatment of psychiatric patients, an especially vulnerable population. Some research, showing elevated rates of rehospitalization and transfers to public mental hospitals in response to incentives to reduce length of stay, supported these concerns.

The research on hospital payment systems led to the development of alternative payment strategies that attempted to balance the aim of cost control with a desire to attenuate the response by providers to "high-powered" financial incentives such as PPS. Specific applications of these ideas were realized in modifications to the alternative to PPS used by Medicare, in the TEFRA approach (Cromwell et al., 1992), and in proposals for a model mental health benefit (Frank, Goldman, & McGuire, 1992).

Incentives also matter within the public-funded mental health system. As noted above, the 1980's saw important changes in the fiscal relationships between levels of government. States created incentives to reduce the use of State mental hospitals and allowed dollars to follow patients into the community. This was in part justified by longstanding observations that organizational arrangements and financial rigidity in public mental health systems stood in the way of people with mental illnesses receiving quality community-based care (Mechanic, 1989). Economic theory bolstered these claims (McGuire & Riordan, 1995). State initiatives in altered intergovernmental financing offered "experiments" that could inform mental health policy. Research on these arrangements indicated that when local mental health programs were given new funds previously linked to State hospitals along with responsibility to pay for any State hospital services used, they significantly reduced their reliance on State mental hospitals (Frank & Gaynor, 1994a).

Research on economics and mental health has illuminated the importance of incentives within the institutions of the mental health delivery system. Econometric analysis has estimated the magnitude of responses to financial incentives by consumers, providers, and government agencies operating within the mental health care delivery system.

Markets Can Fail

A second important lesson from the application of economics to mental health care is that markets can fail and therefore cannot always be counted upon to deliver efficient resource allocations. Moreover, markets do not guarantee fair outcomes. This is most clearly seen in the research on insurance markets and coverage of mental health care. Research on demand response of ambulatory mental health services helps to explain why copayments for ambulatory mental health services are set higher than those for ambulatory medical services. That research does not offer much insight into the prevalence of coverage limits (visits and days) for mental health services (Buck & Umland, 1997). Adverse selection is often pointed to as a key factor explaining coverage limits.

Research has shown that high-cost enrollees are attracted to health plans with relatively attractive coverage provisions for mental health services. This phenomenon creates an incentive for health plans that are paid a premium that does not fully account for the health status of enrollees to adopt measures that discourages people with mental illnesses from joining. This is because payments will tend to reflect the average spending for a population and therefore health plans that enroll a less expensive than average population will profit independent of their efficiency in supply. Competition between health plans, under these conditions, is oriented toward providing coverage and services that attract healthy (low-cost) enrollees and discourages sick (high-cost) enrollees from joining. Competition between indemnity insurance plans may have resulted in inefficiently low levels of coverage (market failure) because of these market forces.

The economic analysis of adverse selection in insurance markets shows the possibility that competition can result in the collapse of insurance markets. In the mental health context, a great deal of attention has focused on the impact of adverse selection on insurance coverage for mental health care. Theoretical and empirical research has pointed to unique features of mental illness that make mental health coverage especially prone to market failure. These features include high costs, persistence of need, and use of specialized services. Empirical analysis of choice of health plans by individuals with histories of mental health treatment reveals that they seek out health plans with the most generous coverage for mental health services.

The studies of adverse selection reported in the literature suggest that users of mental health care tend to have greater health care expenditures in subsequent years than otherwise similar individuals. This means that health plans that attract mental health users are likely to be placed at a financial disadvantage. Hence, competition between health plans appears to result in excessively limited insurance provisions for treatment of mental disorders. It is this set of market outcomes that provides an efficiency justification for public intervention in insurance markets such as parity legislation and mandated benefit laws.

Managed Care Can Control Spending Without Limiting Insurance Coverage

Managed care in general and its application to mental health and substance abuse (known as managed behavioral health care) has fundamentally altered resource allocation in the mental health sector. Managed care arrangements use a variety of techniques unrelated to benefit design to control utilization of services and spending. These techniques include prior authorization of high-cost services, concurrent review of service use, provider price negotiation, financial incentives to providers, network structure, provider profiling, and clinical guidelines. There is strong evidence showing that managed behavioral health care (MBHC), which applies these methods, has a strong effect on the level of spending on specialty mental health care (inpatient, outpatient, and intensive outpatient services). There have been at least five rigorous evaluations of the application of MBHC carve-out programs to private insurance in recent years. In all cases the analyses reported substantial reductions in the level of spending on specialty services relative to the pre-MBHC period. The estimated spending reductions ranged from about 20 percent to 50 percent of pre-MBHC spending levels (Ma & McGuire, 1998; Sturm, Goldman, & McCulloch, 1998).

A number of State Medicaid programs have used MBHC carve-out arrangements. Several of these State initiatives have been subjected to research evaluations. The State programs in Colorado, Massachusetts, North Carolina, and Utah have each been studied. As in the case of private insurance, the introduction of MBHC resulted in important decreases in spending levels for specialty mental health services. The estimated reductions in spending ranged from 17 percent to 33 percent of pre-MBHC spending (Bloom et al., 1998; Burns, Teagle, Schwartz, Angold, & Holtzman, 1999; Callahan, Shepard, Beinecke, Larson, & Cavanaugh, 1995; Christianson et al., 1995).

In addition to affecting levels of mental health spending, some evidence suggests that MBHC also reduces the response to insurance coverage. Two studies in particular provide some empirical clues on this point. Huskamp (1998) studied the introduction of a MBHC carve-out that occurred alongside a benefit expansion in the State of Massachusetts employee population. Her results showed a reduction

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in total spending for the segments of the benefit that were expanded (outpatient services). Her inference was that introduction of the MBHC carve-out dominated any demand response to the terms of coverage. The results contrasted sharply with the predictions from actuarial and economic models of expected spending in this population that used estimates of demand response from the fee-for-service era.

Sturm and his colleagues (1998) studied the implementation of unlimited coverage and equal cost-sharing for mental health and general medical care for the State of Ohio employees. Overall, for all health plans there was a reduction in spending for mental health care. In areas where benefit design was most constrained there were no spending increases. Again, the inference from the results is that the impact of MBHC dominates the effect of expanded benefits.

These results are important because they change the policy debate about the design of mental health coverage. Nearly all proposals for expanding mental health coverage in the fee-for-service era faced concerns over the costs of enhanced benefit largely because of the demand response noted above. The early experiences with MBHC point to the possibility that coverage expansions will be accompanied by smaller demand responses than in the past. Hence, the terms of the trade-off between insurance coverage and costs for mental health care have been redefined under managed care. If these results hold up, this makes the traditional argument against parity for mental health lose force (Frank & McGuire, 1998).

Returns to Spending on Mental Health Care Are Substantial and Improving

In the early 1980's, McGuire and Weisbrod (McGuire, 1981) observed that there was a "lack of consensus about the effectiveness of various forms of therapy" (p. 2). They further observed that "(p)rogress in understanding mental illness and treatment is coming slowly; public policy is unlikely to be rescued by 'breakthroughs' in knowledge." These views represent a readily understandable view of the mental health system. This view also is consistent with a basic view of the health sector in the early 1980's. That is, the health sector was accounting for a large and growing share of our national resources, as measured by gross domestic product (GDP) for which the improvements in the health of the population was modest—a phenomenon known as "flat-of-the-curve medicine." The result was cost inflation. Mental health was long viewed as a particular problem with respect to growth in costs and spending.

Recent economic and clinical research, especially on the treatment of depression and schizophrenia, has begun to produce evidence that challenges these longstanding perceptions. Discovery in the understanding of mental disorders has led to some monumental advances in treatment (USDHHS, 1999). The development of new generations of antidepressant and antipsychotic medications has improved the safety, tolerability, and ultimately the effectiveness of pharmacotherapeutic treatments for mental illnesses. The development of new forms of psychotherapy and psychosocial treatments has created new options for offering effective care and support to people with mental illness.

Recent research on new models for treating depression in the context of primary care medical practices shows improvements in patient well-being as well as improvements in workplace outcomes for people treated for depression (Wells et al. 2000). Cost-effectiveness analysis of preferred treatments for depression show that those technologies meet the standards for cost-effectiveness used by other nations (Canada, Australia) (Lave, Frank, Schulberg, & Kamlet, 1998). Lehman (1999) has compiled similar evidence for treatment of schizophrenia.

Economic research on productivity of mental health treatments has examined the expected outcomes associated with spending on treatment for depression in a large insured population. That research examines changes over time in two productivity indicators: the expected cost per successful treatment (as measured by remissions) and the spending associated with treatments that adhere to published guidelines. In both cases, the research showed that spending per successful treatment has been declining since the early 1990's (Frank, McGuire, Normand, & Goldman, 1999).

While this entire line of research on the economic productivity of treatment is very new, it is already raising challenges to conventional thinking about the productivity and the value of spending on mental health care. It is no longer safe to simply assume that returns to spending on mental health care are small or nonexistent. Economic research in the year 2000 is raising the possibility that spending on illnesses such as depression is cost-effective and is getting more so over time.

Conclusions

Looking back 30 or 50 years, the changes in the mental health delivery system are no less dramatic than the recent economic transitions experienced by many nations in Eastern Europe. The mental health system has been transformed from one in which most decisions about how to spend money to advance the welfare of people with mental disorders were made centrally by State governments and a few Federal agencies to one in which decisionmaking is decentralized and most often made by private organizations. The types of providers, treatments, and modalities available to "patients" in 1960 or 1970 were quite modest by today's standard whereby mental health *consumers* face a wide array of choices with respect to modalities, providers, and treatment technologies. Mental health delivery in 2000 is very much the product of market forces. Markets typically bestow a variety of benefits related to choice, innovation, and efficiency. They also can fail, causing inefficiencies. Markets also do not guarantee fairness or justice in the provision of mental health care. The mental health economy of the year 2000 would be hardly recognizable by someone who knew only the mental health system of the 1950's.

These developments have placed questions of economics at the center of policy debates about mental health care in America. The discipline of economics has responded by developing an active program of research. Economic theory and econometrics have been put to work in the service of better understanding the role of public policy in the context of markets for mental health care. Economic analysis has provided important input into many of the most pressing public debates over mental health policy. New research on fairness in delivery of mental health care, cost-effectiveness, productivity of treatments, managed care for mental health services, incentives for quality care, and technological change in the field is evidence of a dynamic research enterprise that is addressing the latest problems challenging policymakers. Mental health economics is a healthy and forward-looking area of scholarship that is actively engaged in the very human challenges of a rapidly evolving treatment system of care.

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Chapter 9

The Promise and Reality of Managed Behavioral Health Care

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Introduction

Managed care has been characterized as "one of the most significant changes to our nation's health care financing and delivery system in recent years" (Davis, Collins, & Morris, 1994, p. 178). One of the Nation's most senior State mental health commissioners has observed that managed care "is probably one of the most complicated topics of the day. It's a profound change—a shift in the whole way of organizing health and mental health care" (Surles, 1991, p. 4).

For the purposes of this paper, two definitions of managed care will provide context. One definition is that managed care is negotiated quality for a negotiated price: "Capitated prospective payment to preferred providers based on a performance contracting system; whereby the provider assumes financial risk for the treatment of illness, preferred whereby providers must demonstrate quality and accessibility, and performance whereby the provider must earn the reimbursement" (Dyer, 1992, relying on Boland, 1991).

The second definition, by Rosenbaum and Teitelbaum (2000), is "any health insuring arrangement in which the corporate entity, whether directly or through sub-contracts, enters into a formal contractual arrangement with one or more purchasers to both insure a defined group of members and provide members with the care and services that it insures through a network of providers who have been selected by the entity and who are subject to its controls. Managed care companies can take many forms, ranging from non-profit companies to investor-owned insurance companies. A single company may offer many different types of managed care products, ranging from products that are loosely configured to those that are tightly managed, with greater or lesser discretion given to members and providers alike to make decisions regarding the consumption of health care resources. Regardless of the type of product, however, the merger of coverage and care into a single corporate structure is what distinguishes managed care from earlier indemnity or service benefit plans that gave physicians and health professionals full discretion over participation and treatment decisions. In managed care, a single entity empowers itself through its control over providers' access to patients to effectively make treatment decisions by virtue of its coverage decisions."

From a management and policy perspective, managed care's "idea is to make sure the right people are getting the right services at the right time" (Surles, 1991, p. 5). What has been the promise of managed behavioral health care? And has practice been consistent with promise?

On November 20, 1996, the Institute of Medicine (IOM), National Academy of Science (NAS), concluded:

> With great speed and a considerable amount of controversy, managed care has produced dramatic changes in American health care. At the end of 1995, 161 million Americans—more than 60% of the population—belonged to some form of managed health plan...At the end of 1995, the behavioral health benefits of nearly 142 million people were managed, with 124 million in specialty managed behavioral health programs and 16.9 million in an HMO (p. 1-1).

The Surgeon General of the United States (U.S. Surgeon General, 1999, pp. 420–421) has observed: "Managed Care represents a confluence of several forces shaping the organization and financing of health care. These include the drive to deliver more highly individualized, cost effective care; a more health-promoting and preventive orientation; and a concern with cost containment to address the problem of moral hazard."

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*Prepared while the author was on the NAMI staff.

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While 18.8 million Americans have their behavioral health benefits internally managed through HMO (health maintenance organization) enrollment, 176.8 million Americans now have their behavioral health benefits managed by managed behavioral health care organizations (MBHOs) (Open Minds, 1999, p. 5). Three MBHOs—Magellan Behavioral Health (with 36.56 percent market share), ValueOptions, and United Behavioral Health—dominate 57 percent of the market. Over 85 percent of the market is controlled by 11 MBHOs (Open Minds, 1999, p. 5).

Estimated 1995 MBHO revenues were $2.6 billion based on these assumptions (Oss & Moghul, 1996):

- $193.9 million: employee assistance programs (20.2 million enrollees @ $9.60 per year);
- $190 million: integrated programs (9.9 million enrollees @ $19.20 per year);
- $1.6 billion: risk-based network programs (26.6 million enrollees @ $60 per year);
- $404.6 million: non-risk-based network programs (28.1 million enrollees @ $14.40 per year); and
- $187.7 million: behavioral health utilization review programs (39.1 million enrollees @ $4.80 per year).

Major Issues

Among major issues facing managed behavioral health care are the following:

(1) Ability to control cost;

(2) Substitution of types of mental health services;

(3) Adequate services;

(4) Seamless systems of care;

(5) Medical necessity versus clinical necessity versus human necessity;

(6) Public accountability using performance measures of positive clinical outcomes and consumer satisfaction;

(7) Consumer, family, enrollee participation; and

(8) Forms of delivery.

Two important issues not addressed in this text are the distress, distrust, and conflict among professionals, providers, payers, and consumers caused by managed care (Dorwart, 1990; Hall, Edgar, and Flynn, 1997; Schreter, Sharfstein, and Schreter, 1994) and the conflict over access to and confidentiality of medical records.

1. Ability to Control Cost

The U.S. Surgeon General (1999, p. 182) concludes:

> Managed care provision of mental health services emerged partially in response to the overutilization of costly inpatient hospitalization by adolescents in the 1980s (Lourie et al., 1996). The purpose of managed care has been to control spiraling mental health service costs, mostly by limiting hospital stays and rigorously managing outpatient service usage (Stroul et al., 1998). Managed care can offer advantages in terms of cost effective services to meet the needs of children with flexible benefits. It may also lead to denial of needed treatment. While its potential negative effect on the efficacy of mental health care delivered under its aegis is a hotly debated issue, for the most part managed care furnishes the same traditional services available under fee-for-service insurance. The drive for efficiency, however, had led to the introduction of intermediate services designed to divert children from hospitalization. Managed care has shortened hospital stays and increased the use of short-term therapy models (Eisen et al., 1995; Merrick, 1998). Managed care also has lowered reimbursements for services provided by both individual professionals and institutions. This has been accompanied by the construction of provider networks, under which professionals and institutions agree to accept lower than customary fees as a tradeoff for access to patients in the network.
>
> Since 1992, managed care has begun to penetrate the public sector (Essock & Goldman, 1995). The prime impetus for this has been an

> attempt to control the costs of Medicaid, in both the general health and mental health arenas. Since Medicaid appears, on the surface, to be similar to a private health insurance plan, administrators of state Medicaid programs have recently implemented managed care approaches and structures to reduce health care costs. However, Medicaid populations tend to have a higher prevalence of children with serious emotional disturbance than that seen in privately insured populations. Those children generally need longer-term care (Friedman et al., 1996b; Broskowski & Harshbarger, 1998). Managed care strategies, which developed in the private sector, are geared toward a relatively low utilization of mental health services by a population whose mental health needs tend to be short term and acute in nature. As a result, the kinds of cost-cutting measures used by managed care organizations, such as reduction of hospital days and encouragement of short-term outpatient therapies, have not worked as well in the public sector with seriously emotionally disturbed children as they have in the private sector (Stroul et al., 1998) (p. 185).

The Surgeon General expands this discussion of cost control and cost shifting:

> Advocates express concern that the restrictions of public managed care on mental health services shift costs of diagnosis and treatment to other agencies, a process known as cost-shifting. Under public managed care, hospitalization for mental disorder is being substantially cut, with youths being discharged from the hospital before adequate personal and/or community safety plans can be instituted. Child welfare and juvenile justice agencies have been compelled to create and pay for services to support those children who are no longer kept in the hospitals. Thus, while Medicaid's mental health costs may be decreasing in such cases, there may be a substantial cost increase to the other agencies involved, resulting in little if any overall cost saving (Stroul et al., 1998). Similarly, management of only the Medicaid portion of a complex funding system that includes Medicaid, mental health, special education, child welfare, and juvenile justice funds not only creates the cost-shifting described above, but also underestimates the need to manage the funds spent by all agencies (p. 185).

The IOM, NAS, has concluded that "managed care methods are growing at a faster rate in the behavioral health care sector than in the rest of the health care system because of their demonstrated ability to control costs in private health plans and because states are turning to managed care as a strategy to control Medicaid costs" (p. 8-1).

The foremost success of managed behavioral health care is the ability to control cost. Examples include the following:

"Major corporations such as Dupont, Dow, Federal Express, and Xerox have reported cost reductions of 30–50 percent over one or two years and have increased the flexibility of their mental health benefits by eliminating certain coverage limits" (Frank, McGuire, & Newhouse, 1995).

"Some large employers, such as Xerox, Sterling-Winthrop, Alcan Aluminum, and Conoco, have reported overall savings in plan costs for mental health/substance abuse care of about 40% over 2 years after the introduction of managed care" (Frank & McGuire, 1995).

"The experience of the Bell South Corporation illustrates her point. Mental health services, which once accounted for 17% of employee health costs, were cut to 8% of the total after the company adopted a managed care program emphasizing alternatives to hospitalization" (Pear, 1996).

Initial results from the Massachusetts Medicaid Mental Health project: (1) persons using services increased 5 percent; (2) expenditures were reduced by 22 percent; (3) hospital readmissions were reduced; and (4) a more comprehensive array of community-based services were provided (Callahan, Shepard, & Beinecke, 1994).

The U.S. Department of Health and Human Services Office of the Inspector General (HHS-OIG) (2000) documented that four of seven Medicaid managed mental health programs saved from $4 million to $12 million the first year, compared with the previous year's fee-for-service (FFS) expenditures. The other three States limited expenditures to the previous year's expenditures. Four of these States returned "off the top" savings to the State's general fund. The other States used the savings to expand Medicaid to non-Medicaid-eligible persons or to pay for managed care administration.

The debating point is at what price have costs been controlled?

2. Substitution of Types of Mental Health Services

The IOM (1996) concluded that "in the late 1980s, the majority (70 percent) of mental health funds spent by Medicaid and private insurance went for inpatient care, leading many researchers, clinicians, and advocates to question the imbalance and to search for policy changes. Only the introduction of managed care arrangements has led to a significant shift away from costly and often unnecessary inpatient stays to a more appropriate range of outpatient and community-based care (p. 1-1).

Study after study, some previously cited (Frank & McGuire, 1995; Frank, McGuire, & Newhouse, 1999) and others cited below, document that when managed behavioral health care is introduced, inpatient care declines, psychotherapy declines, and alternative services such as residential treatment, day treatment, psychiatric rehabilitation, and case management increase. Examples include the following:

Value Behavioral Health New York State Employees 1993 experience: (1) mental health and substance abuse services delivered increased 20 percent from the previous year; (2) acute inpatient hospital admissions per 1,000 persons declined from 6 to 3.8 from the previous year; (3) New York State saved $25 million from the previous year; (4) use of outpatient chemical dependency treatment visits rose from 20 per 1,000 persons to 71.6; and (5) admissions for alternative levels of care increased from 0 to 1.5 per 1,000 (Shaffer, 1995).

FHC Options CHAMPUS 1986–1994 experience in the Virginia–North Carolina region: (1) persons enrolled increased from 219,764 to 256,839; (2) persons receiving services increased from 7,600 to 19,180; (3) average length of hospital stay declined from 58.11 days to 7.2 days; (4) average cost per inpatient admission declined from $18,539 to $2,013; and (5) partial hospitalization and related day admissions per 1,000 persons increased from 0 to 3.2 (Krupnick, 1995).

Such substitution had resulted in significant tensions between mental health professionals and providers and great hostility toward managed care organizations (MCOs). As Figure 1 documents, provider referrals and reimbursements have changed dramatically as a result of these shifts (Oss & Moghul, 1996; chart created by Clarke Ross).

An HHS-OIG report (2000, #00340) documented that seven State Medicaid managed mental health programs had "dramatic declines" in inpatient costs. One State reduced inpatient costs from 51 percent of mental health costs to 17 percent in one year. In two States, there was a reduction of 40 to 50 percent in available psychiatric hospital beds. In one State, average length of stay dropped from 30 to 20 days.

Four of these seven States documented increased utilization of services from 1 percent to 2 percent after conversion to a managed care system. The seven States developed new services that previously did not exist—residential services, vocational services, respite care services, in-home programs, clubhouses, day services, and personal services.

1994 Indemnity Referrals		**1995 MBHO Referrals**
85%	Psychiatrists	11%
10%	Psychologists	33%
5%	Social Workers	56%
Reimbursements		**Reimbursements**
$150	Average Psychiatrist Visit	$90
$100	Average Psychologist Visit	$75
$85	Average Social Worker Visit	$65

Figure 1. Managed care networks: Referrals and reimbursements: Employer plans; Outpatient services

In six States, psychiatric hospital readmission rates were higher under managed care, with increases ranging from 4 percent to 9 percent. Only one State did not see any "noticeable increase." The HHS-OIG concluded that "lower average length of stays and increased readmission rates may indicate that persons with serious mental illnesses are being released from inpatient care too quickly."

In a separate report (2000), the HHS-OIG concluded that "reductions of inpatient care for children was greater than that for adults." One State reported that children using inpatient care was down 40 percent, compared with a decrease of 2 percent by adults for the same period. Another State reported a 30 percent decrease in psychiatric hospital admissions for children, compared with a decrease of about 6 percent by adults during the same period.

While outpatient programs expanded in all seven States, "the number of children that access services are still generally below the level of access for adults." In one State, the rate of adults accessing outpatient mental health services was 123.7 per 1,000, while the child rate was 54.8 per 1,000. In another State, while 6 percent of adults accessed outpatient services, only 3 percent of children accessed such services.

3. Adequate Services to Persons With Severe Mental Illnesses: "Appropriate Payment Is a Critical Safeguard"

"Appropriate payment is a critical safeguard" is a recommendation and conclusion from the July 1999 draft Health Care Financing Administration (HCFA)-National Academy of State Health Policy (NASHP) report on special needs populations enrolled in Medicaid managed care. Managed care capitation payment rates are often arbitrary and are set in such a way that total funding is lower than the previous Medicaid FFS base. Most public mental health systems in the Nation have historically been underfunded, so capitation rates determined on discounts from past funding are usually inadequate to fund quality care. National Institute of Mental Health researcher Dr. Roland Sturm (1999) recently observed, "Financial viability of managed behavioral health ventures in the public system has been difficult to achieve."

Montana, perhaps the worst public managed mental health program in the Nation (terminated by the State legislature after 23 months) (Croze, 1999a, 1999b; Sturm, 1999), is an example. The five-year managed care contract of $380 million was $6 million less in the first year than the previous year's FFS spending. In addition, Montana added a pharmacy benefit to the capitation contract, and the MCO then absorbed $4 million in pharmacy outlays, $2.8 million over the previous year's FFS pharmacy outlays. The MCO, by contract, was obligated to continue current funding to the State hospital in Warm Springs, limiting community-based services (Faulkner & Gray, 1999; Kanapaux, 1998a, 1998b, 1999a, 1999b, 1999c, 1999d, 1999e, 1999f, 1999g; Rudd, 1998a).

Montana added uninsured persons to the Medicaid managed care program. This group had never been served before, so another $11 million in expenditures were incurred by the MCO. Thus, the MCO received $6 million less than the previous year's spending and incurred $13.8 million in extra and unbudgeted (and thus deficit) expenses in 23 months. Provider payments were substantially squeezed, and consumers were denied services. The MCO was not entirely blameless. From the outset, the original vendor (subsequently sold to another company) had difficulties paying claims in the first place (a capability the State inadequately evaluated during the bidding), a problem that alienated providers and fostered hostility to the program. In one instance, the claims payment issue bankrupted a community mental health center highly regarded by local consumers and their families (Kanapaux, 1998a, 1998b, 1999a, 1999b, 1999c, 1999d, 1999e, 1999f, 1999g; Rudd, 1998a).

Kapur, Young, Murata, Sullivan, and Koegel (1999) conclude, "Previous research has not yielded a fail-safe formula for implementing a publicly funded capitation program." Inadequate resources will lead to program failures. Kapur and colleagues describe the 1993 Los Angeles County Department of Mental Health capitated care program for persons with the most serious mental illnesses. Six not-for-profit community providers were given between $14,000 and $21,000 per client per year to serve persons whose previous-year expenditures averaged $30,000 and were in the top 15 percent of mental health services expenditure users. Providers could disenroll clients and return them to the FFS system. The result was that 1,188 of 1,563 assigned clients were disenrolled. Those disenrolled had average previous-year expenditures of $24,500, while those retained in capitation had previous-year average expenditures of $17,510.

Proper targeting—matching targeted clients to targeted services—can be effective. Magellan's Iowa managed mental health care program targeted an extra and special payment of $900 per member per month (PMPM) for programs of assertive community treatment (PACTs) for the population with the most severe illnesses. This targeting has resulted in marked improvement in consumer functioning and a reduction in average annual treatment costs from $18,000 to $11,000 (Zwillich, 1999).

Determining adequate payment levels for public mental health services is difficult, particularly when comparing State-to-State. But some State-specific information has to be used to make an initial judgement of adequacy. Massachusetts capitation rates are $100 PMPM for persons with mental illness on Supplemental Security Income (SSI) and $70 PMPM for non-SSI-eligible persons with mental illness enrolled in Medicaid and also served by the State mental health department (GAO, 1999a; Open Minds, 1999; Sheola & Lane, 1999). Compare this to Arizona's Maricopa County rate of $44.49 PMPM for persons with serious mental illness

(Davis, 2000; Open Minds, 1999; Rudd, 2000c). Are the costs of living between Arizona and Massachusetts really that much different? What accounts for these dramatic differences? In a Federal class action lawsuit against Arizona, the parties, including the State, agreed that at least $316 million was required by Maricopa County to adequately finance its public mental health system (Snyder, 1999). Currently, $112 million is spent.

In Massachusetts, 100 percent of the capitation goes to direct clinical care. Pharmacy is not part of the capitation. A separately funded administration budget is separately negotiated. Massachusetts uses for-profit vendors, but profit is exclusively tied to the achievement of performance goals. In year one, the vendor receives a bonus for achieving performance targets. In year two, the previous bonus target becomes a contractual obligation with financial penalties. New performance targets are introduced each year, so the program continually improves. And Massachusetts uses risk corridors, so profit and loss are limited. Massachusetts's capitation financing is unique in the Nation (GAO, 1999a; Sheola & Lane, 1999).

Capitation rates can be designed as incentives or disincentives in serving the most disabled of the population with mental illness. Tennessee is an example. In 1996–1997, the State used a blended behavioral capitation rate of $22.93 PMPM. The result was that persons with serious mental illness were largely unserved. In 1997, the capitation rate was adjusted. Persons with serious mental illness who were served received a PMPM rate of $319.41. The result: by the end of 1999, the proportion of the population with severe and persistent mental illness and serious mental illness actually served was identical to Center for Mental Health Services (CMHS) estimated prevalence (2.6 percent and 5.4 percent of the enrolled population). But in an inadequately financed system operating under a global budget, the amount left over for persons without serious mental illness was $8.83 to $10.35 PMPM. Community mental health providers entered the year 2000 demanding an end to the "two-tiered" capitation system so they could serve more persons with less serious mental illness. The problem, if the change is enacted, would be again underserving persons with serious mental illness (Kanapaux, 1999d; Open Minds, 1999; Wooldridge & Mitchell, 2000; Yennie, 1998; Yennie & Birch, 1999).

The Dallas, Texas, North Star managed behavioral health care program has come under recent criticism for underserving the population. The capitation rates used in North Star are $3.06 PMPM for an SSI aged recipient, $10.24 PMPM for an SSI child, $45.61 PMPM for an SSI adult, $23.99 PMPM for a Temporary Assistance for Needy Families (TANF) adult, and $9.25 PMPM for a TANF child (Bagwell, 2000; Kanapaux, 2000; Rudd, 2000a, 2000b, 2000c).

After a bumpy first two years, the Iowa managed behavioral health care program is generally viewed by national experts as a positive program (Croze, 1999a, 1999b; Sturm, 1999). The SSI child capitation rate varies geographically from $78.84 PMPM to $117.72 PMPM, while the SSI adult PMPM capitation rate varies geographically from $70.85 PMPM to $103.98 PMPM (Faulkner & Gray, 1999; Open Minds, 1999; GAO, 1999a).

A 1993 study of expenditures in three States (Larson et al., 1998) demonstrates that serving persons with mental illness is more expensive than serving the rest of the Medicaid population. In Michigan, the average Medicaid expenditure was $1,726 for persons with mental illness and $583 for other Medicaid persons. In New Jersey, the differential was $3,143 for Medicaid-eligible persons with mental illness compared with $1,301 for others. In Washington, the differential was $1,119 and $570. Are the capitation rates paid to serve persons with mental illness reflective of such differential expenditure histories? In the National Alliance for the Mentally Ill's (NAMI) 1997 Managed Care Report (Hall, Edgar, & Flynn, 1997), managed care programs failed to provide persons with serious mental illness with adequate hospital length of stay, programs of assertive community treatment, access to the newest classifications of medications, psychiatric rehabilitation, and supported housing (Hall, Edgar, & Flynn, 1997). To what degree is inadequate funding a root cause of this failure? CMHS supported researchers (Wooldridge & Mitchell, 2000) have concluded that "few, if any, States have succeeded in setting capitation rates correctly." The reason is that States lack good encounter data.

Adequate payment is a complex and difficult subject. Several strategies can be advanced to address this issue:

(1) The HHS-OIG (2000; #00343) recommended that drug formularies be excluded from managed care. The HHS-OIG studied seven Medicaid managed mental health programs. None included pharmacy "primarily because States were unsure of how to accurately determine the cost for this benefit...States believed that if they did not set the capitation rate for prescription drugs at a correct

level, managed care organizations would have an incentive to restrict access" (p. 8; see also Wooldridge & Mitchell, 2000).

(2) Another strategy is to document actual per-person utilization. Unfortunately, only 27 State mental health systems in the Nation can do this. States should develop and use an unduplicated count of persons served in public systems (SAMHSA, 2000).

(3) As tempting as the goal of universal coverage is, don't add the uninsured into capitated managed care until a historic utilization pattern is known. That means financing the uninsured through FFS or special risk arrangements until actual experiences are known. Montana and Tennessee added to their financial pressures by adding the uninsured to their managed care program without a real utilization history (Kanapaux, 1998a, 1998b, 1999a, 1999b, 1999c, 1999d, 1999e, 1999f, 1999g; Tennessee, 1999; Rudd, 2000c; Wooldridge & Mitchell, 2000; Yennie, 1998; Yennie & Birch, 1999).

(4) Implement managed care and, if there are savings, make a judgment after the savings have occurred about whether to invest in additional services or return the savings to the State treasury. Reinvestment is always a possibility, as in Colorado and Iowa (Croze, 1998). Iowa required that, for three consecutive years, profits of $1 million each year be invested in mobile counseling and therapeutic socialization programs. Colorado required that $1.3 million in year one profits and $1.9 million in year two profits be invested in telemedicine, 24-hour intensive care, and respite care (Croze, 1998; GAO, 1999a; Nardini, 1999).

(5) Compare different States' capitation rates. Yes, local costs and composition of professional services differ but not to the degree reflected in current State capitation funding levels for these types of programs.

(6) When historic utilization is not known, use a risk corridor. Risk corridors set limits on the amount of profits and losses that are realized by MCOs. Risk corridors apply whether the MCO is a for-profit or a nonprofit. Eight States (California, Hawaii, Massachusetts, Nevada, Ohio, Oklahoma, Utah, Wisconsin) currently use risk corridors (HCFA-NASHP, 1999) and one (Massachusetts) uses risk corridors in its mental health program.

Even following these strategies, capitation rates remain problematic. Studies by the New York and Ohio Departments of Mental Health (NASMHPD, 1993; Roth, Snapp, Lauber, & Clark, 1998) document significant client movement in and out of Medicaid and out of community mental health programs. This movement makes questionable the use of risk-adjusted capitation plans based primarily on past service utilization. On the other hand, the New York data show that even though a third of the 212,000 Medicaid-eligible persons with severe mental illness annually leave the program rolls, both the aggregate number of eligible persons and utilization of similar patterns of care remained generally constant, affirming capitation rates based on prior utilization. As Roth and associates conclude, "clearly there is a critical need for more systematic, longitudinal information about people with severe mental disabilities and their service utilization."

Inflexible reliance on prior utilization also presents problems. As New York unveils its special-needs plans for adults with serious mental illness, counties with better reform track records are being financially penalized. New York City, which has a recent history of moving persons out of hospitals and into community treatment, will receive a per member per year capitation of $8,479. But Westchester County, which has historically relied much more on inpatient care, will receive a per member per year capitation of $12,087 (Kanapaux, 1999i).

4. Seamless Systems of Care That Include Integrated and Coordinated Delivery: Linkage Between Medicaid and Public Mental Health Has Failed

Managed care for persons with mental illness in the government sector has been initiated through the Medicaid program. Medicaid is the single most significant payer of public mental health services, and yet, there has been little linkage between the State Medicaid and State mental health agencies. Without such linkage, failure in providing appropriate treatment and support services will and does occur. This is a fundamental systemic and structural flaw that is pervasive throughout the United States.

This linkage problem occurs even in the State-managed mental health programs considered by national experts to be the most positive. Some experts (Croze, 1999a, 1999b; Sturm, 1999) consider Massachusetts one of the more positive experiences, but here linkage fails. The Medicaid managed mental health program is responsible for "acute" care while the Department of Mental Health is responsible for "continuing" care. But where is the linkage between the two? There are no clear linkages. For example, consumers and families wait for services and providers refuse to serve until complex billing procedures between the two agencies are clear. Colorado Health Networks is considered by some observers (Croze, 1999a, 1999b; Sturm, 1999) to be a positive program. But the Medicaid managed mental health program is not responsible for persons requiring State psychiatric hospital care. The consequences: numerous Medicaid enrolled persons are transported to State hospitals (suggesting that financial incentives are, perhaps, as alive and well in the public sector as they are in the private). Because Fort Logan, near Denver, is a smaller hospital with typically 100 percent occupancy, many persons in north and central Colorado are transported, at a cost of $450 a ride in an ambulance or in shackles by police, to the southern hospital in Pueblo (Ross, April 1999).

Any public managed care program for persons with severe mental illness must have precise boundaries established between the Medicaid managed care entity and the State mental health agency—or no boundaries at all (i.e., consolidation). Minimally, all consumers, families, and providers must know which agency is responsible for which services under which conditions. If boundaries and responsibilities are not clear, or if agencies remain fragmented structurally or functionally, persons will wait for treatment, and this could be extremely dangerous, particularly for those with the most severe illnesses.

Frank and Morlock (1997) have observed, "When multiple parties exert partial authority, act according to different rules, and respond to incentives from a variety of financing sources, the result is unlikely to be coordination among complementary community institutions." They conclude that "simple strategies that just manipulate either the organizational or the financial arrangements do not enhance systemic coordination." Frank and Morlock (1997) propose "mixed strategies" of "blending centralized organizational structure" and "aggressive management in the form of monitoring, feedback, and education at the provider agency level." Irrespective of the particular expertise of a managed care vendor, and even in the face of an overwhelming social commitment from these private organizations, service will continue to be abysmal if public fiscal and administrative agencies are unable to collaborate on a plan of action.

The HHS-OIG (2000, #00344) observed that in seven Medicaid managed mental health programs, "responsibility for care is fragmented with possible cost shifting," and the OIG recommended the development of interagency agreements to promote coordination.

5. Medical Necessity

Managed care makes cost-effectiveness treatment decisions with the construct of "medical necessity" protocols (Bennett, 1996; Astrachan, Levinson, & Adler, 1975; Ross, December 1996). At first blush, the application of medical necessity criteria seems relatively straightforward. Care is medically necessary where there is a diagnosable mental illness or addiction disorder, the patient has impaired function or is clinically unstable, and treatment is authorized to restore normalcy or reduce disability. However, uniformity of professional judgment regarding each of these three criteria is lacking. Professional disagreements over these three criteria and the complex, unique, and sometimes persistent need of persons with serious illness have resulted in criticism of managed care's reliance on medical necessity protocols (Hall, Edgar, & Flynn, 1997).

Shaffer and Lieberman (2000) discuss the justification and evolution of medical necessity within the managed behavioral health care field. Medical necessity was a concept used to govern access of care using a standardized methodology of criteria for certifying care through managed care arrangements. Viewed as proprietary managed care protocols not sharable with the provider community, the use of medical necessity "resulted in a significant amount of confusion and animosity in the provider community toward managed care" (Shaffer & Lieberman, 2000).

Today, the use of medical necessity in the private insurance world generally includes six elements (Shaffer & Leiberman, 2000). The first and most significant element is the following: intended to prevent, diagnose, correct, cure, alleviate, or preclude deterioration of a diagnosable condition contained in ICD–9 or DSM–IV that threatens life, causes pain or suffering, or results in illness or infirmity.

The other four elements include an expectation to improve the individual's level of functioning; individualized services to treat the person's symptoms and diagnosis not in excess of the patient's need; based on nationally accepted clinical standards; and no more intensive or restrictive than necessary to balance safety, effectiveness, and efficiency. Controversy has revolved around "not in excess of need," who determines clinical standards, and the balance with efficiency.

Professional disagreements abound over the medical nature of many emotional situations such as marital stress, bereavement, and life-adjustment situations; over which profession working in which treatment setting is most effective; and over the medical nature of "humanistic tasks," such as growth and development activities to assist persons dissatisfied with themselves or with their interpersonal relations. For persons with serious mental illness, rehabilitation and habilitation are required in order to reduce disability and foster self-sufficiency. Historically, only the more progressive and affluent public mental health systems, greatly aided by the rehabilitation option of Medicaid, have paid for psychiatric rehabilitation.

Sabin and Daniels (2000) provide an instructive lesson on modifying medical necessity protocols in public managed mental health care programs. They use Iowa as a case example. Sabin and Daniels observe that medical necessity "is the vehicle for specifying how broad or narrow insurance coverage will be."

Relying on the work of Hollingsworth and Sweeney (1997), Sabin and Daniels (2000) contrast the typical private insurance definition of medial necessity with the typical public sector definition of medical necessity. Hollingsworth and Sweeney (1997) documented that, in Wisconsin, private insurance definitions of medical necessity would cover only 60 percent of current public sector treatment of persons with serious and persistent mental illness.

Sabin and Daniels (2000) say that all stakeholders agree that "the central source of turmoil" in Iowa's Medicaid managed mental health care initial implementation in 1995–1996 "was the clash between private-sector medical necessity criteria and public-sector safety-net functions" (p. 446; also see Hall, Edgar, & Flynn, 1997). The State and its managed care vendor, with the involvement of consumers, families, and providers, negotiated three changes to the vendor's typical private insurance model of medical necessity:

(1) Up to five days of mental health inpatient and one day of substance abuse inpatient court-ordered evaluation are covered under the Iowa Medicaid plan.

(2) Children may not be discharged from inpatient settings until "a safe living arrangement and a plan for the necessary follow-up for mental health treatment has been arranged." As a result, 194 children were retained in inpatient care for an average of 17.6 days each, and for the first time a wide array of alternatives became available.

(3) "Psychosocial necessity" was added to the operational definition of medical necessity. Psychosocial necessity is defined as an expansion of medical necessity "that examines environmental factors that inhibit or hamper the effectiveness of treatment when they are addressed" and explicitly includes rehabilitative and supportive services. "Managed care case managers are instructed to specifically consider the potential for services/supports to allow the enrollee to maintain functioning improvement attained through previous treatment."

Rosenbaum, Shin, Zakheim, Shaw, and Teitelbaum (1998) document the tremendous variety in State Medicaid managed behavioral health care structure and specificity of contractual obligations in defining and implementing medical necessity. They cite the Iowa contract as a model for the Nation. The Iowa contract provides specific guidance on the protocols that are applied in determining the medical necessity of care at various levels and stages of treatment. The contract also establishes an accepted practice standard of coverage that is specific to mental illness and specific to addiction treatment, as contrasted with general health standards of treatment.

6. Public Accountability

> *In God we trust; everyone else must supply outcome data.*
> —U.S. Health Care (Ross, 1997)

> *Cost is the driver—delivery is the key.*
> —American Managed Behavioral
> Healthcare Association
> (Ross, 1997)

> *No state had working outcomes in place—*
> —HHS-OIG (2000)

Three concepts and approaches underlie managed behavioral health care: (1) documented performance by managed care companies and providers as the basis of continued business; (2) positive clinical outcomes and consumer satisfaction as a basis for such documented performance; and (3) the management of innovative and comprehensive service delivery networks in order to deliver individualized, appropriate, and flexible service arrangements (Ross, 1997).

In 1996, the IOM concluded that much additional work is required: "The committee members chose to take an evidence-based approach to their task, but they found that the research bases and the development of quality assurance and accreditation standards are far less advanced in behavioral health care than in other areas of health care... Further, development of analytical tasks is necessary and this evidence base needs to be expanded before detailed recommendations can be made... In their current forms, performance indicators are not specific for particular treatment characteristics (organizational and clinical), and there is a lack of consensus of clinical judgement with regard to the relationship to outcome."

The HHS-OIG concluded the "the overall effect on the health of persons with serious mental illnesses" in seven Medicaid managed mental health programs "was not quantified" (2000). Further, "none of the states included in our study had working outcome measures in place before or after they connected to managed care. Even basic utilization data, such as lengths of hospital stays and number of visits, was inconsistently reported by states" (p. 13). The HHS-OIG recommended that the HCFA and the Substance Abuse and Mental Health Services Administration (SAMHSA) collaborate to develop outcome measurement systems.

Managed care is a paradigm shift. The role of the management agent, or managed care vendor, is at the core of both decisionmaking and accountability. Figure 2 is an attempt to demonstrate this paradigm shift.

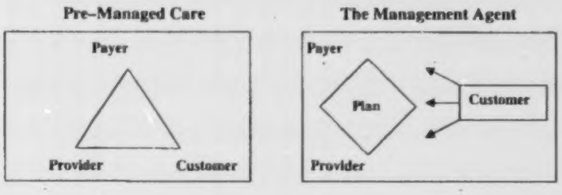

Figure 2. Paradigm shift

The collection of data on managed behavioral health care organizations is challenging for two primary reasons:

(1) The desire, and the legal requirements of Federal antitrust mandates, for individual organizations to maintain strict ownership and confidentiality related to such data (i.e., the competitive advantage issue), and

(2) The degree of resources (time, money, human resources) needed to develop the data and report results in the requested form of a data collection instrument.

A handful of States and their MCO vendors have developed, use, and make publicly available documented performance measurements. Colorado Health Networks has done an outstanding job at documenting its performance in developing self-help groups and drop-in centers, and in publicly documenting average time for first appointments, penetration rates, hospital readmission rates, average hospital length of stay, waiting list elimination, mental health and physical health followup services within 30 days from inpatient discharge for both adults and children,[1] and involvement of family and guardians in discharge planning (Forquer, 1999). Iowa State officials have published in numerous journals and newsletters about the performance data they require of their MCO vendor; yet the public's access to actual data has been difficult (Nardini, 1999; Rudd, 1998b). Massachusetts has structured its entire profit scheme to the attainment of performance data (GAO, 1999a; Sheola & Lane, 1999). These are the more positive States, the "beacons of success."

Only 27 State mental health agencies in the Nation are able to provide an unduplicated count of persons served and the services that they use (SAMHSA, 2000). How can meaningful performance information be collected if a State cannot even provide an unduplicated count of persons served?

Consumers want plan-by-plan comparisons using performance data. But where does this exist in the Nation? The National Committee on Quality Assurance (NCQA) has developed the HEDIS (Health Plan Employer Data and Information Set). Work groups of the Mental Health Liaison Group, a coalition of national mental health associations working together in Washington, DC, believe that the HEDIS data set is grossly inadequate in terms of meaningful measures for serving the most seriously mentally ill population. It derives, as it name suggests, from the needs of employers and employed persons—not the indigent or those whose disabilities preclude employment. Yet, HEDIS has value to consumers because it is a nationwide standard performance system, data are posted on the NCQA website (*www.ncqa.org*), and it does contain two measures of importance: antidepressant medication management experiences and followup of care after hospitalization within seven days. But HEDIS is a voluntary process and few MCOs and MBHOs in the Nation make public their HEDIS reporting. Maryland, New Jersey, and Utah publish consumer guides that contain plan-by-plan comparisons using HEDIS data. Several States, such as New York, require MCOs to provide the State with HEDIS data but then refuse to release such data to the public.

The behavioral health care field—through the National Government's Center for Mental Health Services (1996); the managed care industry's trade group, the American Managed Behavioral Healthcare Association (AMBHA, 1995, 1998); the Nation's largest family and consumer membership association, the National Alliance for the Mentally Ill (Hall, Edgar, & Flynn, 1997; NAMI, 1999; Steinwachs, Flynn, Norquist, & Skinner, 1996); and the field's administrative leadership (American College of Mental Health Administrators [ACMHA], 1997; Ganju & Lutterman, 1998; National Association of State Mental Health Program Directors [NASMHPD], 1998) has demonstrated leadership and innovation in the development of performance measurement. None of these initiatives currently allow health plan enrollees and their families to actually compare plan-specific performance, but each has moved forward the concept and state-of-practice in managed behavioral health care.

The National Government's CMHS developed the Mental Health Statistics Improvement Program (MHSIP) Consumer-Oriented Mental Health Report Card (CMHS, 1996). CMHS relied extensively on focus groups of persons with mental illness. CMHS MHSIP is a comprehensive array of performance indicators including clinically based outcomes (symptom distress reduction, independent functioning increase) mixed with consumer life expectations (hope, personal freedom, autonomy in personal decisionmaking).

The managed behavioral health care industry trade association, AMBHA, has developed two versions of performance measures, known as PERMS (Performance Measures for Managed Behavioral Healthcare Programs) (AMBHA, 1995, 1998). PERMS is a modest set of measures resting on three principles: meaningfulness, measurableness, and manageability. Unlike the other behavioral health care performance measures, actual national aggregate performance data have been collected and published (AMBHA, 1996). However, AMBHA has refused to release MBHO-specific performance data. So an actual benchmark has been established, but no comparative data are publicly available.

In 1995, NAMI and Johns Hopkins University established the Outcomes Roundtable. Involving a variety of stakeholders, the Roundtable "set in motion a process to develop science-based approaches to outcomes assessment that should strengthen the delivery of cost-efficient, high quality mental health care and substance abuse treatment in real-life settings" (Steinwachs, et al., 1996). The Roundtable has assessed the state of science in outcomes measurement and its application, and individual members of the Roundtable are testing the feasibility of various outcomes assessment.

In 1997 (Hall, Edgar, & Flynn, 1997), NAMI issued a report card on the managed behavioral health care industry. NAMI's report compared MBHO written responses with NAMI member expectations in nine areas. In 1999, NAMI developed its Accountability Template—What Consumers and Families Expect from Treatment Systems for Persons with Severe Mental Illness (NAMI, 1999).

In its 16-State Project, the National Association of State Mental Health Program Directors (Ganju & Lutterman, 1998; NASMHPD, 1998) gathered potential performance measures that State mental health agencies were considering for use and merged this with the CMHS MHSIP measures. Some of these measures were then field-tested in five State mental health agencies. A range of performance data was reported from the five States on the 46 percent of indicators that these five States claimed they were able to report. While important benchmarks were created, no comparable State-specific performance data are available.

In an effort to merge existing performance measurement systems and to develop "consensus" first within the mental health field, followed by outreach with the substance abuse field, the American College of Mental Health Administration (ACMHA, 1997) developed a summary foundation document. ACMHA is still refining the domains of consensus, and no data collection has occurred.

Another major performance measurement effort currently taking place is an initiative of the MacArthur Foundation and CMHS to adapt a generic consumer-focused assessment instrument specifically focused on behavioral health care (R.O.W. Sciences, 1999). In 1997 the National Government's Agency for Health Care Research and Quality supported research by Harvard Medical School, RAND, and the Research Triangle Institute that led to the development of the Consumer Assessment of Health Plans (CAHPs). Both NCQA HEDIS and AMBHA PERMS use some CAHPS measures. Beginning in June 2000, a sample of Medicare recipients enrolled in managed care plans will be administered the CAHPS (HCFA, 2000). In current development by MHSIP, in collaboration with Harvard University, is a Consumer Assessment of Behavioral Health Survey (MHSIP CABHS) (R.O.W. Sciences, 1999).

Much creative intellectual development work has occurred in behavioral health care. Only AMBHA PERMS has collected and published aggregate performance data. Only NCQA HEDIS has collected and published comparative health-plan-specific performance data.

Four States (Colorado, Iowa, Massachusetts, Washington) studied by the U.S. General Accounting Office (1999a) require their managed care vendors to collect encounter data, but none of the four systematically use the data other than to cite penetration rates, the proportion of an enrolled population actually receiving mental health services. The range of penetration rates between four State managed mental health programs were Massachusetts, 25.1 percent; Iowa, 12.8 percent; Colorado, 11.9 percent; and Washington, 7.0 percent. GAO concluded that data from MBHOs "were untimely, incomplete, or inaccurate." Sturm (1999) has concluded: "While all companies claim to measure outcome, none are systematically examining key outcomes for people with serious mental health problems."

In the NAMI 1997 Managed Care Report Card (Hall, Edgar, & Flynn, 1997), NAMI failed the leading MBHOs for not maintaining scientifically up-to-date and comprehensive treatment guidelines and for failing to use measurable patient outcomes used to determine coverage policy. Most MCOs publish consumer satisfaction surveys which consistently show that roughly 80+percent or more of enrollees are satisfied. The surveys are usually done by internal MCO marketing departments and occasionally by contracted public opinion firms or universities. These studies often do not reveal levels and areas of dissatisfaction. Even this generalized satisfaction is changing. In a June 1999 survey by Hewitt Associates (Bureau of National Affairs, 1999), 22 percent of consumers in managed care plans reported they were dissatisfied, an increase from 17 percent in 1997.

The use of independent, third-party, and consumer- and family-staffed organizations is basic to NAMI's evolving agenda to ensure accountability by all participants in the health care arena—payers, purchasers, health plans, management agents, delivery systems, and providers (Ross, December-January, 1998–1999; Ross, March 1999). Several public mental health systems have launched and are using consumer- and family-staffed independent consumer interview teams who focus on consumer dissatisfaction and mechanisms for resolving such dissatisfaction. Alabama, Georgia, Massachusetts, Ohio, and Pennsylvania operate such CSTs (consumer satisfaction teams). None are ideal in their independence. All have had to accommodate purchaser and political realities. Some involve providers. One uses focus groups rather than individual consumer interviews. One is financed by the MCO, calling into question its independence. Yet all offer more independence and a greater consumer/family focus than normal MCO operations (Ross, December/January, 1998–1999; Ross, March 1999).

Few public purchasers have contracted with external evaluators at the beginning of a managed care contract and made a commitment to continually using such external evaluators to assist them in judging vendor performance. Massachusetts (Beinecke, Keane, Symanzick, & Casey, 1999; Callahan, Shepard, & Beinecke, 1994; Beinecke & Lockhart, 1998) started such an external evaluation, but did not sustain it. Florida (Shern & Robinson, 1999) has such an evaluation agreement in its Tampa Bay and Jacksonville demonstration projects.

The use of third-party independent entities to promote accountability continues to grow. In 2000, NCQA will require independent validation of all HEDIS data provided by health plans. Twenty-nine States now mandate independent external clinical appeals (NCSL, 1999). A centerpiece of all major legislative proposals before Congress is mandatory, independent, third-party clinical review. Four States—Delaware, New Hampshire, Oklahoma, and Pennsylvania—currently use third-party, independent consumer and family monitoring teams in their State psychiatric hospitals (GAO, 1999b; Ross, December/January, 1999–2000). Two State Medicaid managed mental health care programs (Colorado and Washington) use independent ombudsman programs (GAO, 1999a).

The HHS-OIG (2000) has recommended that Medicaid managed mental health programs "established independent, third party mental health systems for conducting beneficiary satisfaction survey."

Clearly, much more needs to be done in the area of public accountability, but the trend is clearly toward more accountability. Johnston and Romzek (1999) have concluded, "There is a tendency in privatization efforts, and especially in contracting relationships, to assume that contract management and accountability will take care of themselves or that they can be relatively easily achieved through contract monitoring. The reality is that contract management and accountability do not take care of themselves."

7. Meaningful and Authentic Consumer, Family, and Enrollee Participation Is Rare in All Aspects of Services Planning, Implementation, and Evaluation

Many public purchasers and their management agents fail to meaningfully involve consumers, families, and enrollees in their operations. Consumers lack necessary information. In an October 1998 NAMI survey of its members' experiences with managed care, 55 percent of respondents did not know how to file an appeal with their MCO. Respondents to the survey were those members who took the initiative to send in a survey response, so one would assume that they are the more involved and knowledgeable citizens. This survey demonstrates that all parties involved in health care must make a greater effort to educate citizens about their rights as health plan enrollees. CSTs, previously discussed, are vehicles for education, as are consumer and family organizations, such as NAMI, and ombudsman programs.

NAMI's 1997 Managed Care Report Card (Hall, Edgar, & Flynn, 1997) failed the leading MBHOs regarding consumers and their family members being effectively engaged in their care. Not only can consumer and family organizations, ombudsmen, and purchasers help, but health plans themselves can actively involve consumers and families. In a representative democracy, citizens expect representation, which includes the important principle of meaningful and substantial involvement in the design, delivery, and monitoring of the system. Authentic public participation includes not only this representation, but also the citizens' confidence that their input has an impact. Impact determines whether the involvement was authentic. Since 1986 and the P.L. 99–660 Federal Mental Health Block Grant requirement, every State has had to operate a citizens' mental health planning and advisory council. Some of these have been forums for meaningful and authentic involvement. Health plans will have to learn from their State council counterparts.

Pires, Armstrong, and Stroul (1999) have studied how MCOs and MBHOs have involved families in their operations. By and large, MBHOs significantly involve families more than MCOs. Regarding initial planning and implementation activities, families were significantly involved in 36 percent of MBHOs compared with 13 percent of MCOs. Involvement in current refinements were even more striking: 47 percent of MBHOs significantly involved families, while only 13 percent of MCOs involved families. While 77 percent of MBHOs provided a training and orientation program to families, only 23 percent of MCOs provided such training.

Some States have attempted more meaningful family and consumer participation (HCFA-NASHP, 1999):

Oregon's Medicaid staff held weekly meetings with health plan representatives, beneficiary representatives, and State social services agencies for more than a year before bringing beneficiaries with disabilities into managed care. These meetings covered topics such as building a common understanding of case management and case workers. After implementation, Medicaid staff met regularly with MCO management, medical directors, and advocacy and social service agency representatives to discuss payment rates, data reporting, and other matters relating to health care.

In Colorado, the Medicaid Managed Care Contracting Disability Working Group, composed of individuals who are disabled and their family members, MCO administrators, and State personnel, formulated recommendations to assess risk-adjusted rates and choice of a home health agency.

In Vermont, a Quality Improvement Advisory Committee composed of consumers, advocates, MCO representatives, providers, and State staff was established to assist the State with ongoing and comprehensive improvements of its managed care program.

In California, a 13-member committee is composed of community advocates (one seat is reserved for a representative of persons with disabilities), MediCal beneficiaries, and representatives of the county social services agency and health care agency.

The Massachusetts Medicaid managed mental health program has a consumer advisory council and a family advisory council that meet monthly with both State officials and the managed care vendor (Sabin & Daniels, 1999). "When asked about the councils' most important accomplishment, council members cited their work to influence the annual performance standards for the carve-out company" (p. 884).

Sabin and Daniels (1999), advocates of meaningful consumer and family involvement, conclude, "Consumers, families, and the public cannot be expected to trust health care systems that do not hold themselves accountable for demonstrating that their limit-setting policies are reasonable and fair" (p. 883).

The HHS-OIG (2000) has recommended that Medicaid managed mental health programs involve beneficiaries and families in the conversion process from FFS and in treatment planning.

8. Forms of Delivery

There are many different forms of managed behavioral health care delivery. As cited previously (Open Minds, 1999), MBHOs dominate the market. MBHOs deliver management of care in two forms: direct contracts with payers (known as "carve-outs" because behavioral health care is carved-out from other health care) and subcontracts with MCOs, in which the MCO contracts directly with the payer and then the MCO subcontracts with the MBHOs.

Three other management forms are important in today's market: the full-service HMO, the preferred provider organization (PPO), and point of service (POS).

A full-service HMO is an organization that provides comprehensive medical care for a fixed annual fee. Behavioral health care is delivered as any other form of health care. There are four of these types of HMOs: group model, individual practice association, network model, and staff model.

A PPO is a variation of the traditional FFS care arrangement in which health plan enrollees receive services through a "preferred" network of providers. When the enrollee goes outside the network, which is allowed, the enrollee is frequently required to pay a higher copayment.

A POS plan is a form of PPO. Primary care physicians are usually the first provider of intervention and, as in PPOs, enrollees are charged significant additional copayments when they go out-of-network.

While these are the predominant forms of delivery, there are additional delivery forms based on function, including the following:

- Administrative services organizations or administrative service only organizations (ASOs), in which the management agent assumes no financial risk and is contracted to perform administrative services only, such as claims processing;
- Employee assistance programs (EAPs), in which services are designed to assist employees, their family members, and employers in finding solutions to workplace and personal problems;
- Integrated EAPs, in which an employee is enrolled in an MCO or MBHO for health benefit services, and that MCO/MBHO also provides EAP services; and
- Stand-alone utilization review (UR)/case management: These organizations provide clinical review of inpatient or outpatient services. They may also have case management responsibilities for certain individuals with substantial health challenges. These organizations are usually paid a set fee for each UR or each case managed.

Only one published study exists that compares the delivery of managed behavioral health care services to the same enrolled population in the same geographic areas by two different delivery systems (HMOs vs. MBHOs). An evaluation of Tampa Bay and Jacksonville managed behavioral health care delivery (Shern & Robinson, 1999) compared HMOs that either contracted with MBHOs or internally managed benefits. The University of South Florida evaluation documented that MBHOs far outperformed HMOs in the areas of penetration rates, proportion of adults with serious mental illness who reported receiving mental health services, persons with schizophrenia who received atypical antipsychotic medications, and individuals who are discharged from inpatient settings and are seen within 30 days. HMOs and MBHOs performed about equally in terms of persons with major depression who received selective serotonin reuptake inhibitors (SSRIs). MBHOs performed somewhat better than HMOs in providing day treatment and targeted case management.

Conclusion: Promise and Reality Don't Connect

The Nation stands at a critical juncture. Homelessness, the criminalization of mental illness, and public acts of violence have increased during the past decade. The Nation's work to reduce stigma, reflected in a plethora of parity legislation across the country, combined with our concerns about homelessness, criminalization, and violence, draw unprecedented attention to mental health care delivery in public programs. Evidence-based best practices exist in pockets of excellence around the country. How do we replicate these best practices to further the public interest? That is the challenge.

Managed care has overpromised what it is capable of delivering. Seamless systems of integrated and coordinated delivery have not happened. The linkage between Medicaid and public mental health has not occurred. Adequate services to persons with serious mental illness do not exist in many parts of the country and are more an exception than the norm. Appropriate funding doesn't happen. Payers and MCOs rarely make public their documented performance. Little meaningful and authentic consumer, family, and enrollee participation occurs. But there are beacons of success.

In 1998, one of the managed behavioral health care industry's founders (Cummings, 1998) published an article on the "Spectacular Accomplishments and Disappointing Mistakes" of the industry. Cummings cited cost containment, industry growth, saving the mental health benefit, accountability, continuum of care, and self-regulation as the accomplishments. He identified the disappointments as loss of clinical focus, price merger mania, the public relations disaster, competitive paranoia, and integration with primary care.

In 1999, one of the Nation's leading mental health services researchers (Mechanic & McAlpine, 1999) concluded that the "mission" was "unfulfilled" and littered with "potholes." While there has been "an increased democratization of care," with more persons with mental illness receiving more care, through a similar uniform level of treatment, this standardization has further undermined care for persons with the most serious forms of mental illness. While some managed care plans have reduced hospitalization and increased alternative services, many other plans have merely reduced hospitalization and increased profit.

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Chapter 10

Co-occurring Addictive and Mental Disorders

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Introduction

Over the past two decades, concern about how best to serve persons with co-occurring mental illness and substance use disorders has steadily increased. It is estimated that up to 10 million people in the United States meet criteria for co-occurring disorders in any given year (CMHS, 1997). Public and professional attention stems from increasing awareness of two principal findings: first, the heightened awareness of the prevalence of substance abuse and dependence in persons with mental disorders and of psychiatric symptoms among persons with substance use disorders; and second, the consistent associations of poor adjustment and suboptimal outcomes among persons with co-occurring disorders.

Clinicians, health care administrators, families, and consumers articulate a sense of frustration that not enough is being done to address the needs of persons with co-occurring disorders. These groups witness the revolving-door nature of these individuals as they cycle in and out of costly and inappropriate treatment settings such as emergency rooms and jails. While significant advances have been made in our understanding of the scope of the problem and the potential effectiveness of nontraditional interventions, access to care is not available to the majority of persons with co-occurring disorders (CMHS, 1997). This paper will highlight epidemiological findings, evidence-based practices, principles of care associated with positive outcomes, and policy directions to address the needs of persons with co-occurring mental and addictive disorders.

Epidemiology

Treatment planning and policy development require an accurate description of the problem to be addressed. Despite considerable progress in assessment tools and strategies, the identification and characterization of persons with co-occurring disorders remains a difficult task. Any drug of abuse may combine with any mental disorder to produce a wide range of symptoms and disability. The degree of disability associated with these disorders will vary over time. These factors create a heterogeneous population that varies not only in presenting signs and symptoms, but also in the ways its members come to the attention of treatment systems. In reviewing epidemiological data, it is important to keep this heterogeneity in mind and not assume prevalence rates alone can inform systemic responses. Substance use disorders in clinical samples of patients with schizophrenia (Barry et al., 1995; Mueser, Bennett, & Kushner, 1995), bipolar disorder (Goodwin & Jamison, 1990), and young persons with long-term mental illnesses (Safer, 1987) reveal a wide range of prevalence estimates, from 10 percent to more than 65 percent. Variability in prevalence rates can be attributed to differences across studies in the setting in which patients are sampled, the methods used for assessing psychiatric and substance use disorders, and the demographic mix of the study sample (Galanter, Castaneda, & Ferman, 1988; Mueser, Bennett, & Kushner, 1995).

Studies of clinical samples likely overestimate the population prevalence rates because of the health-seeking bias inherent in their design. The 1992 National Longitudinal Alcohol Epidemiologic Survey (Grant, 1997), in which persons with dual diagnoses were five times more likely to seek services than singly diagnosed respondents, and similar findings in the National Comorbidity Survey (Kessler et al., 1996) support this bias. Kessler and colleagues (1996) reported that 19 percent of alcohol-dependent and 26 percent of drug-dependent individuals without a co-occurring mental disorder received treatment in a 12-month period, but in the presence of a co-occurring disorder the rates increase to 41 percent and 63 percent, respectively.

Controlling for this health-seeking bias, the rate of co-occurring substance use disorders in people with mental disorders is substantially greater than is the rate of substance use disorders in the general population. The Epidemiological Catchment Area (ECA) study (Regier et al., 1990), and later, the National Comorbidity Survey (NCS) (Kessler et al., 1996) provide compelling evidence of this. The ECA assessed psychiatric and substance use disorders in more than 20,000 persons living in the community and in various institutional settings and found that persons with a psychiatric disorder, especially those with a severe mental illness, were at increased risk for developing a substance use disorder over their lifetime. For example, persons with schizophrenia were more than four times as likely to have had a substance use disorder during their lifetime than persons in the general population, and those with bipolar disorder were more than five times as likely to have had such a diagnosis.

The NCS, using a multistage, stratified probability sample of more than 8,000 noninstitutionalized U.S. citizens, also found high prevalence rates of co-occurring disorders. For example, among NCS respondents with an affective disorder, as many as 37 percent had at least one 12-month co-occurring addictive disorder. A key finding of the NCS was the temporal relationship between the onsets of the two disorders in those individuals with dual diagnoses. In the vast majority (83.5 percent) of people, the mental disorder comes first. This fact has practical implications for prevention strategies. Specific disorders, such as bipolar disorder, were demonstrated to predict subsequent vulnerability to the development of substance use disorders, suggesting that persons with these disorders should be assessed thoroughly and provided with risk-reduction advice if they do not currently have a co-occurring substance use disorder. While we cannot assume a causal link between the co-occurrence of mental and substance use disorders, the repeated identification of this strong association must be considered in service system design.

Outcomes in Traditional Systems

Substance abuse among persons with severe mental illness has been associated with negative outcomes, including increased vulnerability to relapse and rehospitalization (Brady et al., 1990; Carpenter, Mulligan, Bader, & Meinzer, 1985; Caton, Wyatt, Felix, Grunberg, & Dominguez, 1993; Haywood, Kravitz, Grossman, Davis, & Lewis, 1995; Lyons & McGovern, 1989; Negrete, Knapp, Douglas, & Smith, 1986; Seibel et al., 1993); more psychotic symptoms (Carey, Carey, & Meisler, 1991; Drake, Osher, & Wallach, 1989; Osher et al., 1994); greater depression and suicidality (Bartels, Drake, & McHugo, 1992); violence (Cuffel, Shumway, & Chouljian, 1994; Yesavage & Zarcone, 1983); incarceration (Abram & Teplin, 1991; Bureau of Justice Statistics, 1999); inability to manage finances and daily needs (Drake & Wallach, 1989); housing instability and homelessness (Caton et al., 1994; Drake & Wallach, 1989; Osher et al., 1994); noncompliance with medications and other treatments (Alterman, Erdlen, LaPorte, & Erdlen, 1982; Drake, Osher, & Wallach, 1989; Miller & Tanenbaum, 1989; Owen, Fischer, & Booth, 1996); increased vulnerability to HIV infection (Cournos & McKinnon, 1997; Cournos et al., 1991) and hepatitis (Rosenberg et al., submitted); lower satisfaction with familial relationships (Dixon, McNary, & Lehman, 1995); increased family burden (Clark, 1994); and higher service utilization and costs (Bartels et al., 1993; Dickey & Azeni, 1996).

Associations between substance use disorders among persons with mental illness and negative outcomes are not consistent across studies, and establishing causality is complicated by several factors. Comparing persons with severe mental illness who abuse substances with those who do not assumes that the two groups are otherwise equivalent, and they clearly are not. In the first place, the substance-abusing patients are more likely to be young and male (Mueser et al., 1990; Mueser, Yarnold, & Bellack, 1992). They also may be different from patients who never abuse substances prior to the onset of symptoms. For example, between-group differences have been described in the age of onset of the mental disorder (Breakey, Goodell, Lorenz, & McHugh, 1974), in premorbid functioning (Arndt, Tyrrell, Flaum, & Andreasen, 1992), in premorbid sexual adjustment (Dixon, Haas, Weiden, Sweeney, & Frances, 1991), and in family history of substance use disorders (Noordsy, Drake, Biesanz, & McHugo, 1994). Finally, the association of medication and treatment noncompliance, homelessness, and other social problems with psychiatric illnesses and substance abuse may account for their poor adjustment (Drake & Wallach, 1989; Osher et al., 1994). Despite the difficulty in establishing causality, the negative outcomes associated with the presence of co-occurring disorders in traditional treatment settings suggests that nontraditional treatment approaches are required.

Evidence-Based Treatment

Given the high prevalence rates and the high morbidity and mortality associated with having co-occurring disorders, the identification of effective interventions has gained both immediacy and a growing database. For the past 15 years, extensive efforts have been made to develop integrated models of care that bring together mental health and substance abuse treatment. The reported studies have focused primarily on individuals with serious mental illnesses and co-occurring substance use disorders. Recent evidence from more than a dozen studies shows that comprehensive integrated efforts help persons with dual disorders reduce substance use and attain remission (Drake, Mercer-McFadden, & Mueser, 1998). Integrated approaches also are associated with a reduction in hospital utilization, psychiatric symptomatology, and other problematic negative outcomes. Comprehensiveness was the critical component in successful interventions. Those programs that simply added a group or short-term treatment intervention to existing programming suffered high dropout rates and had little overall impact on rates of either substance abuse or psychiatric symptomatology. Comprehensive approaches were defined by the inclusion of a staged approach to care with motivational interventions, assertive outreach, intensive case management, individual counseling, long-term interventions, and family interventions. Positive outcomes included high rates of engaging and retaining patients in care, reduced hospital utilization, reduced substance use, and increased abstinence. This research base has allowed the development of treatment principles associated with positive outcomes.

Principles of Care

Historically, mental health and substance abuse approaches to care have been different. However, principles of care within the two fields converge on respect for the individual; reaching out to engage those who cannot yet trust; and the importance of community, family, and peers to recovery. The American Association of Community Psychiatrists used the existing evidence base shaped by the experience of developing effective systems of care to develop the principles below (AACP, 2000). These serve to bridge the gap between the service orientations and characterize an effective system of care for persons with co-occurring disorders. They can be used for both planning and evaluation purposes.

Acceptance

In a consumer-/family-oriented system, for persons with co-occurring disorders, the service goal is to ensure that each clinical contact is welcoming, empathic, hopeful, culturally sensitive, and consumer centered. Special efforts should be made to engage persons who may be unwilling to participate in recommended services or who do not fit into the available program models.

Accessibility

In an accessible system for persons with co-occurring disorders, 24-hour crisis services are available to provide competent assessment and intervention for psychiatric and substance symptomatology in any combination. Arbitrary barriers to immediate evaluation (e.g., alcohol levels below legal intoxication) are not present.

Integration

There must be an integrated conceptual framework for designing a comprehensive service system for persons with co-occurring disorders. Treatment must address two or more interwoven chronic disorders. This can be achieved by implementing the following procedures: (1) develop a common language for describing the target population; (2) develop a common methodology for describing categories of integrated services in the system based on the respective severity or disability of the individual; (3) ensure that each disorder receives specific and appropriately intensive primary treatment that takes into account the complications resulting from the co-occurring disorders; and (4) identify a primary clinician for each individual who has the responsibility of coordinating ongoing treatment interventions for both disorders. While no specific model should assume to be generalizable across systems, the common goal should be for persons to get their needs comprehensively addressed within one setting, by one set of providers. Successful integrated efforts will reduce conflicts between providers, eliminate administrative barriers to care, and assist the patient by providing a consistent message about recovery principles (Minkoff, 1989).

Continuity

Psychiatric and substance use disorders, regardless of severity, tend to be persistent and recurrent. Co-occurrence of these disorders occurs with sufficient frequency that a continuous and integrated approach to assessment and treatment is required, regardless of the location of the initial clinical presentation. A goal of the service system is to provide persons with co-occurring disorders early access to continuous integrated treatment relationships that can be maintained over time through multiple episodes of acute and subacute treatment.

Individualized Treatment

Any psychiatric disorder with any substance use disorder may occur in any person, regardless of age, gender, or socioeconomic status. Effective responses must be tailored to the needs of the consumer, instead of consumers needing to fit the specifications of the program. Integrated, continuous treatment relationships should be developed to support the consumer with a balance of appropriate case management and care. The system should be created utilizing existing services and programs as much as possible, with matching of programs to individual needs to ensure opportunities for meaningful choice and empowerment at each point during the course of treatment.

Comprehensiveness

Persons with co-occurring disorders have broad primary care and behavioral health treatment, social service, and housing needs. Therefore, the shared mission of the system must be to provide a broad range of necessary services. Some programs within this system will be fully integrated; other programs will be primarily psychiatric with substance disorder capability or enhancement, or vice versa; and some programs will have minimal behavioral disorder expertise (e.g., housing programs) and require cross-training and collaboration.

Emphasis on Quality

The system of care should be designed in accordance with established national standards for serving persons with co-occurring disorders in public managed care systems (e.g., CMHS Workforce competencies for dual diagnosis treatment in managed care systems [CMHS, 1998]). When evidence for the effectiveness of interventions has been established, these best practices should be introduced into the system of care. The development of a standardized assessment tool across all clinical settings will enhance quality evaluation efforts. In addition, the identification of objectives or quality monitors (structure, process, and outcome) as markers for successful implementation is a critical step.

Responsible Implementation

There must be an implementation plan that identifies priorities for and barriers to change, and that recommends strategies to overcome such barriers. The plan should be derived from: (1) the identification of existing services for persons with co-occurring disorders, and specification of the role of those services in the system of care; (2) the identification of significant gaps in existing services, which require new services, programs, and/or funding to address those gaps; (3) the development of a process to modify policies, procedures, regulations, or laws in order to create flexible funding streams; and (4) the creation of an infrastructure empowered to oversee and direct the implementation process.

Optimism and Recovery

A growing evidence base suggests that persons with co-occurring disorders who receive care based on the aforementioned principles have positive outcomes. This evidence is contrary to prevailing attitudes among administrators, providers, families, and consumers. This nihilism, which serves the systems goals poorly, can be addressed through disseminating available evidence and data. Every person, regardless of the severity and disability associated with his or her co-occurring disorders, is entitled to experience the promise and hope of recovery.

Barriers and Solutions

While it is possible to identify principles of care, it is more difficult to identify the persons within the existing service systems who should be responsible for implementing these principles and engaging the person with co-occurring disorders in treatment. Persons with co-occurring disorders may seek help from mental health, substance abuse, or primary health care providers. The systems that support these providers historically have operated independent of one another with separate philosophies, administrative oversight, and financial support (Ridgely, Goldman, & Willenbring, 1990). Both public and private sector initiatives over the past 20 years have reinforced the separation of these systems (Osher & Drake, 1996) while persons with co-occurring disorders continue to flood clinical settings.

The debate surrounding appropriate models of care and the locus of responsibility for providing care is often acrimonious as administrators and policymakers struggle to stretch scarce resources over the spectrum of care required for effective treatment of "singly" diagnosed populations. Failure to resolve these barriers to care ensures that access to effective integrated care interventions is unavailable. In order to move the debate forward, there must be a shared language and vision for how to provide care to dually diagnosed individuals. One useful model was developed in New York and endorsed by both the National Association of State Mental Health Program Directors and the National Association of State Alcohol and Drug Abuse Directors (NASMHPD & NASADAD, 1999). Rather than focus on diagnoses, the model uses two dimensions—the severity of the mental illness and the severity of the addiction—to define four subgroups of dually diagnosed individuals (Figure 1). The model then assigns responsibility to (1) primary care providers with consultation from behavioral health specialists (for persons with low severity on each dimension), (2) one of the specialty sector systems (for persons with either severe mental illnesses or severe alcohol or drug abuse) with collaboration from the other specialty sector, or (3) a set of providers providing integrated care to the most disabled consumers (Figure 2). The advantages of this model are that it encompasses the heterogeneity of the dual diagnosis population, it assigns responsibility to every system for providing some degree of care to dually diagnosed individuals, and it is flexible enough to be adapted to most service settings. Significant overlap between systems is inherent in the model and it more realistically corresponds to the multiple pathways used by dually diagnosed persons to access care.

Using a framework as outlined above can serve as the basis for State and local strategies to ensure that the needs of persons with co-occurring disorders are addressed. The appropriate domain for service delivery and the eligibility criteria for various service settings will vary depending on existing resources and programmatic structure. Various mechanisms can be used to ensure accountability and manage client flow. These mechanisms include interagency agreements, joint program development, cross-training of providers, and the specific identification of individuals with co-occurring disorders as

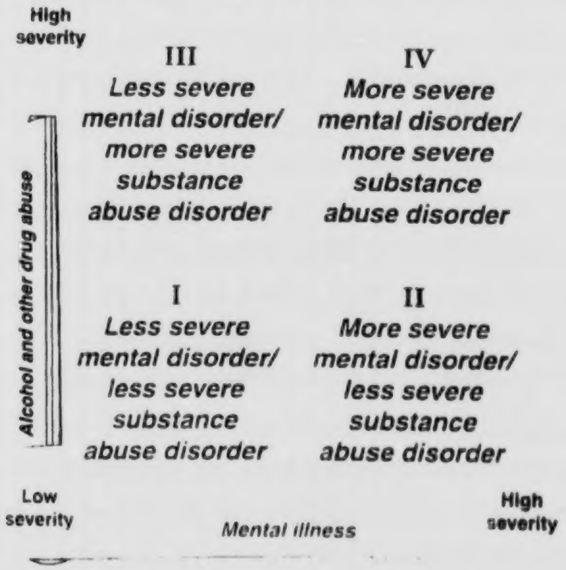
High severity
III
Less severe mental disorder/ more severe substance abuse disorder
IV
More severe mental disorder/ more severe substance abuse disorder
Alcohol and other drug abuse
I
Less severe mental disorder/ less severe substance abuse disorder
II
More severe mental disorder/ less severe substance abuse disorder
Low severity
Mental illness
High severity

Figure 1. Co-occurring disorders by severity

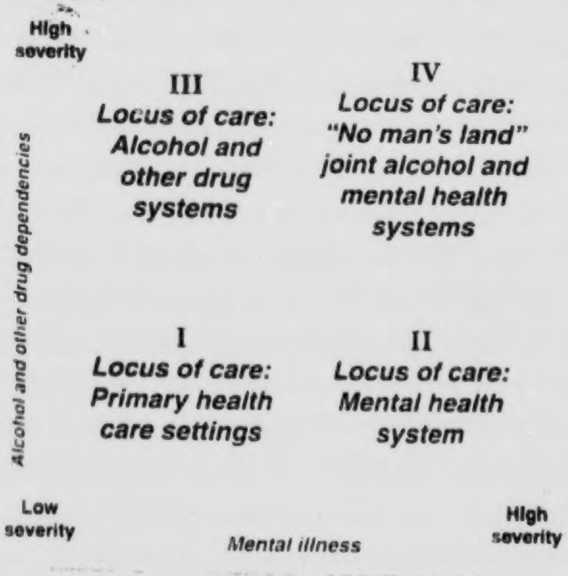
High severity
III
Locus of care: Alcohol and other drug systems
IV
Locus of care: "No man's land" joint alcohol and mental health systems
Alcohol and other drug dependencies
I
Locus of care: Primary health care settings
II
Locus of care: Mental health system
Low severity
Mental illness
High severity

Figure 2. New York State generic model of locus of care based on severity of mental illness and alcohol and drug dependencies

a priority population within all strategic planning initiatives (Ridgely & Dixon, 1995). At the community and program level, Minkoff (1997) has outlined a process for implementing integrated services, starting with the development of an integrated philosophy among all relevant stakeholders—from consumers to administrators. After agreement on an integrated mission and some principles of care, an assessment of current organizational capacity is performed and service gaps are identified. Participants then prioritize modest steps toward creating a continuum of assessment and treatment services using evidence-based practices. Ongoing psychiatric and addiction training is provided to all staff. Minkoff emphasizes the importance of leadership at all levels and the utility of ongoing process and outcome evaluation.

Conclusions

The mental health and addiction fields share a history of stigma and discriminatory financing practices despite having positive outcome data on treatment effectiveness every bit as good as data on somatic health services (National Institute of Mental Health, 1993). And providing services to dually diagnosed individuals with complex bio-psychosocial needs is necessarily costly. But the fact that integrated approaches with demonstrated effectiveness for those with co-occurring disorders are not widely available cannot be solely explained on the basis of scarce resources. Not providing high-quality care is ultimately more costly in terms of both dollars and quality of life.

The failure to offer more comprehensive care for persons with co-occurring disorders is a failure in clinical and administrative leadership. Progressive policies within private and public sectors can produce incentives for integrated efforts. As an example, language embedded within a small Federal assistance program for homeless persons, the Program for Assistance in the Transition from Homelessness, limits funds to those entities that agree to address the needs of dually diagnosed homeless persons in a coordinated fashion. Similar nondiscriminatory language should be included in other behavioral health service and research grants, block grants, or requests for managed care proposals. Our consumers do not have the opportunity to separate their addiction from their mental illness, so why should we do so administratively and programmatically?

Principles of care within mental health and addiction fields converge on respect for the individual, belief in the human capacity to change, and the importance of community, family, and peers to the recovery process. There is far more to be gained by an alliance between these entities than sustaining the current divisions. The 10 million citizens with co-occurring disorders deserve no less.

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Chapter 11

Adult Mental Health Services in the 21st Century

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The observation that adult mental health services have changed dramatically over the past three centuries, even over the past few decades, is trite. Yet, historical context is critical for understanding and appreciating the current state of the field. Reflections on the history of publicly funded mental health services provide good grounding for a current review. These examples are partly based on Grob's (1994) excellent recitation of the history of care in America for those with mental illnesses. (See also Chapter 2 in the present publication.) Not surprisingly, a large section of the book documents the history of institutional care.

In colonial times, the care of those with mental illness was provided almost solely by the family, sometimes with financial assistance provided by the local community, according to Grob's review. Changes in the economic and social structure, as well as the rise of "moral treatment" as a service philosophy, spurred the establishment of "retreats" and asylums beginning in the early 19th century. Institutional care went through numerous transformations over the years, but remained the predominant form of treatment for persons with serious mental disorders for almost two centuries. While well-meaning in theory, institutional treatment became little more than a place to warehouse people with serious mental illnesses. By the mid-1900's, the picture of institutional settings offered by Albert Deutsch in his book "The Shame of the States" was grisly: "As I passed through some of Byberry's wards, I was reminded of the pictures of the Nazi concentration camps...I entered a building swarming with naked humans herded like cattle and treated with less concern, pervaded by a fetid odor so heavy, so nauseating, that the stench seemed to have almost a physical existence of its own" (Deutsch, 1946, pp. 41–42).

Treatment options other than institutional care were minimal during this period. Freud's influence in the early 20th century and the development of psychoanalytic theory led to the emergence of psychotherapy delivered in office settings as an acceptable form of treatment. However, this form of treatment was most often available only to those who could afford to pay privately and most often focused on persons with neuroses. Nonetheless, psychoanalytic/psychodynamic psychotherapy practices in the mid-20th century were called into serious question (Eysenck, 1952). Biological treatment, especially the use of psychosurgery and electroshock, had gained a foothold as well. The 1950's were noteworthy for the initial use of phenothiazines in the treatment of psychoses that opened the eyes of many to the potential benefits of psychopharmacological approaches. However, these traditional neuroleptics, some of which are still in use today, are associated with numerous side effects that can and do diminish the quality of life for those with mental disorders.

With this historical backdrop, it is clear that advances in the delivery of mental health services have been made, especially over the past few decades. Many of these advances in treatments and services are enthusiastically documented in the first Surgeon General's report on mental health (U.S. Department of Health and Human Services, 1999). In this chapter, we provide an overview of important developments that have occurred more recently in the delivery of adult mental health services. Our review begins with a discussion of service planning, itself a vital improvement in service delivery, including influences on service planning decisions, such as psychiatric epidemiology and data-driven decision-making. This is followed by an assessment of recent changes in financing and organization of services, including parity legislation, managed care, and systems interventions. We then comment on specific intervention philosophies and approaches, including innovations in the development of community long-term care supports and psychopharmacological and psychosocial interventions. We conclude with a summary that offers a general comment on where the field has come from and where further development is needed, and a caution about overexuberant optimism regarding where the field currently stands despite obvious advances.

Service Planning

The organized planning of mental health services dates back to the first Federal efforts to develop a community mental health center system. The earliest of the Federal community mental health acts, which led to the construction of community mental centers, required States to provide plans of how they would create catchment areas and then structured services for all catchment areas in order to qualify for the grants (Beigel, 1982). Throughout the history of community mental health center funding, States were required to complete a variety of planning mechanisms, many of which included public comment, and to include appropriate providers and later consumers and family members in the planning process. This basic model was adopted by many States in their community mental health legislation in the 1960's and early 1970's. Very substantial numbers of States in one manner or another, either at county or catchment area level, required governmental or quasi-governmental entities to create plans. Those plans became the basis for the funding of community mental health services and, in some cases, the basis for performance indicators and the measurement of the adequacy of the delivery system (Estes & Wood, 1984). The core assumptions in this planning process are to deliver care at the most local level possible, organize a continuum of care, and include an extensive public process. This planning process is unique among other health and human services systems in the United States. The nature of other health and human services systems, even those that are largely governmental, tend not to be as participatory or as publicly planned and organized as mental health services (Hadley & Culhane, 1993).

Data Influences on Services Planning: Psychiatric Epidemiology and Service System Data

Service planning has been advanced by efforts to document the scope of mental illness in the general population. The information culled from psychiatric epidemiology studies is critical for policymaking and service planning, both nationally and locally. An appreciation of the historical antecedents to current psychiatric epidemiological efforts is useful (for a more complete review, see Robins, 1990). The Midtown Manhattan study began in 1954 and was the first systematic assessment of the prevalence of mental illness in a U.S. community. In addition to providing estimates of the extent of illness, the study's intent was also to show that psychosocial and sociocultural factors influenced illness occurrence. The results of the Midtown Manhattan study were widely cited and caused a reexamination of the validity of methods used in psychiatric epidemiology. There are some major difficulties in estimating prevalence rates—a continuing problem in mental health services research. First, many previous studies had been inconsistent in identifying whether a case was coded as positive for psychopathology for lifetime prevalence of a disorder, or whether the disorder was manifest at the time data were gathered. Second, some studies used psychiatric hospitalization rates as an indicator, despite the fact that variability in incidence and prevalence rates was certainly confounded by the availability of inpatient beds and the proximity of inpatient facilities. It is also likely that underreporting of serious mental illness occurs more frequently in rural than in urban areas.

In the early 1970's, persons with serious and persistent mental illness became more widely recognized in the mental health literature as an underserved population. The early studies, taken together, did not provide compelling evidence regarding the absolute prevalence rate of mental illness. The Epidemiologic Catchment Area (ECA) study was a major accomplishment in providing a more systematic assessment of the occurrence of mental illness (Robins & Regier, 1991). The results of the ECA suggested that about 22 percent of the population were affected by mental illness during a 1-year period, and that, of those, about 7 percent were continuously affected for longer than 1 year. Of the latter, about 3 percent met diagnostic criteria for severe mental disorders. These findings were landmarks in mental health services research because they both broadened the scope of the problem of mental illness and refined estimates regarding resources necessary to meet demand for mental health services.

The National Comorbidity Survey (NCS) similarly revolutionized our understanding of mental illness and the need for mental health services (Kessler, McGonagle, Zhao, et al., 1994). This study demonstrated that lifetime prevalence for any mental disorder based on self-report approaches 50 percent, effectively establishing that being affected by mental illness is normative. Perhaps more important, the NCS established rates of comorbid disorder demonstrating that the probability of co-occurrence increased dramatically with each additional occurrence of a mental illness. The NCS was also the first psychiatric epidemiologic study to use a national probability sampling frame, which dramatically improved the external validity of estimates. The aforementioned epidemiological studies have been used to document inadequacies in funding for mental health services and are important in planning where precious service (and research) resources are spent.

Efforts to measure quality-of-care and continuous quality improvement represents another exciting data-driven trend in mental health service planning. The Institute of Medicine offers one definition of health care quality: "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional practice" (Lohr, 1990). There has been a great deal of recent activity geared toward the measurement of quality of mental health services (Bickman & Salzer, 1997). Perhaps the best known and most visible of these efforts is the Mental Health Statistics Improvement Program sponsored by the Center for Mental Health Services. Other efforts include those mounted by the National Committee for Quality Assurance (1997), and the American Managed Behavioral Healthcare Association and the American College of Mental Health Administrators (ACMHA, 1997). These efforts are driven by a growing consensus among providers, consumers, insurers, and policymakers that these data are needed to improve accessibility, acceptability, and accountability for dollars spent (Druss, Rosenheck, & Stolar, 1999).

Little consensus exists as to the specific elements of a minimum data set to monitor system performance, but most attempts consist of service system structure, service delivery process, and some indication of outcomes (Salzer, Nixon, Schut, Karver, & Bickman, 1997). These efforts can be conceptualized as focusing on two distinct areas of mental health systems: performance indicators (e.g., Kamis-Gould, 1987; Windle, 1986) and cost-effectiveness (e.g., Frank, 1981). A number of analytic strategies for dealing with multiple indicators of system inputs and outputs have been utilized including structural equation modeling, data envelopment analysis (Schinnar, Kamis-Gould, Delucia, & Rothbard, 1990), and the balanced scorecard (Santiago, 1999). Ultimately the goal of these data-monitoring systems is continuous quality improvement or more specifically, total quality management (Forquer & Muse, 1996).

Integrated mental health care information systems are in their infancy, and it is too soon to know how they will impact system performance or influence service planning. One reason for this is that there is relatively little funding for these efforts, and, perhaps more important, little standardization to make comparisons between providers and within providers over time. Cleary and Edgman-Levitan (1997) emphasized the importance of incorporating consumers' perspectives into measurement of health outcomes. Lack of consensus about indicators between consumers, providers, and third-party insurers may be the single biggest obstacle to implementation of a performance and outcomes measurement system in mental health.

Philosophical Factors in Service Planning: Community Support Program and Consumerism

The philosophy underlying national and local service planning is guided by principles developed as part of the Community Support Program (CSP) and by the rising influence of consumers. Both highlight quality-of-life issues in the lives of persons with mental illness. CSP, which originated under the auspices of the National Institute of Mental Health (NIMH), recognized that persons with severe and persistent mental illness (SPMI) include individuals who have a disorder that seriously impairs their personal relationships, living arrangements, education, or employment for an extended period. CSP provided for the needs of persons who have undergone psychiatric treatment more intensive than outpatient care more than once in a lifetime (e.g., emergency services, alternate home care, partial hospitalization, or inpatient hospitalization), or experienced a single episode of continuous-structure supportive residential care or hospitalization for at least 2 months. In addition, a CSP client was expected to meet at least two of the following criteria on a continuing or intermittent basis for at least 2 years: (1) unemployed, employed in a sheltered work setting, or has marginal or limited skills and poor work history; (2) requires public financial assistance for community maintenance and unable to procure this assistance without help; (3) shows severe inability to establish or maintain a personal social support system; (4) requires help in basic living skills; and (5) exhibits inappropriate social behavior which requires intervention by the mental health or judicial system (NIMH, 1980).

Community care of consumers is predicated on the assumption that the community will provide social and tangible support to ensure the continued optimal functioning of the consumer. The ideal of community placement presumes the immersion of the consumer into the social structure of the family and community, connecting the consumer to supports that enable the consumer to thrive in the community. Mental health, human service, welfare, and medical service organizations constitute the potential sources of formal support for the consumer residing in a community. The role of formal organization is to ensure the availability of housing, economic support, and psychiatric and medical treatment to sustain the consumer. Ideally, case management enables the consumer and the primary group to access the formal service system by facilitating contact between a variety of service systems and the consumer (Fox, Blank, Kane, & Hargrove, 1994).

Kanter (1989) characterized participation in all aspects of the consumer's community life as the unifying principle of case management. Other principles include (1) continuity of care; (2) use of the case management relationship; (3) titrating support and structure; (4) flexibility; and (5) facilitating the consumer's resourcefulness. Kanter emphasized the case manager's responsibility for linking with family and social networks of clients in order to enhance and develop consumer resourcefulness. Several investigators have reported that the extent of consumers' support networks and the frequency of the case manager's contact with family, neighbors, and friends of consumers were related to decreased case manager/client contacts, decreased hospitalization, and increased community stability (Harris & Bergman, 1988; Schoenfeld, Halevy-Martini, & Hemley-Van de Velden, 1985).

Meeting the comprehensive needs of consumers with long-term mental illnesses in community settings requires provision and coordination of a variety of mental health and social services (Turner & TenHoor, 1978) as well as effective interactions between these resources and the families and significant others associated with the consumer (Intagliata, 1982). The organizational ability of local units to effectively mobilize and coordinate relationships among various service systems determines effective service delivery to consumers. There are both theoretical and pragmatic questions about how formal care systems and primary groups cooperate to solve mutual problems without interfering with each other.

The consumer movement has experienced unprecedented growth over the past decade and has had an important impact on the service planning philosophy. The consumer movement, like any movement, is not monolithic. There are many organizations concerned about mental health policy and practices that have varied experiences and interests, from those who are directly impacted by mental health services (i.e., service recipients), to family and friends. Views on issues understandably differ at times, sometimes dramatically. Most important, this vast movement has found a "voice" and is increasingly being understood as a long-ignored constituency, arguably the most important constituency, in mental health policy, practice, and research debates.

Consumer organizations and representatives are major collaborators in the development of national and local policymaking and are called to provide testimony in front of congressional committees on important topics such as seclusion and restraint. Consumer organizations have also had major influence in the development and proliferation of interventions. For example, the National Alliance for the Mentally Ill (NAMI) has taken up the cause for the expansion of jail diversion and Assertive Community Treatment interventions across the country, albeit not without opposition from other consumer groups. Program developments, especially consumer-operated and -delivered services (e.g., self-help/mutual-help groups, drop-in centers, peer-delivered services) also benefit from the efforts of the consumer movement. Finally, consumers are influencing the aforementioned efforts in the assessment of quality of mental health care.

Financing and Service System Integration

Over the past 40 years there have been dramatic changes in the financing and organization of the mental health system from a relatively simple single-facility system to a current system characterized by a multiplicity of providers which exist in a highly complex and often fragmented environment (Grob, 1991; Hadley, Schinnar, & Rothbard, 1991; Rothbard, Hadley, Schinnar, Morgan, & Whitehill, 1989; Schlesinger, 1986). Since financing models often drive the organization of care, it is important to attempt to understand how the changes in the organization of the service system have been shaped by the changes in the financing of the system. Since 1950, the mental health system has been through what can be described as five major phases of financing mental health services (Hadley, Schinnar, & Rothbard, 1991).

Throughout the 1950's, the mental health system was relatively simple with most funding coming from States and the Federal government to operate State psychiatric hospitals and Veterans Administration hospitals. The first major change in this system began in the early 1960's with the advent of Community Mental Health Center Grants funded by the Federal government (ADAMHA, 1981). Funds flowed through grants from NIMH to a new set of local provider agencies termed "community mental health centers" whose very existence was often dependent on the grant (Beigel, 1982). In the 1970's, the beginning of the fee-for-service (FFS) Federal and State health care finance systems, Medicaid, and Medicare created further complexity in the system. These programs simultaneously expanded the number of persons receiving service and supported the creation of new general hospital psychiatry services (McGuire & Fairbank, 1988). At around the same time a small but increasing number of private health insurers began to expand coverage for mental illness. This growth in the privately insured sector helped create the for-profit private psychiatric hospital system and the ever growing private practice of psychiatrists and other mental health professionals. In recent years the pressures to achieve "parity" of mental health benefits and the enormous growth of the care system have increasingly led to a wide variety of managed mental health care (Oss, 1994).

From Unmanaged Care Systems to Managed Care Organizations

In the past decade, privatization of mental health care delivery has resulted in the diminishing role of the "State" in administering publicly funded mental health care programs for persons with severe mental illness (SMI). Most States today are contracting out mental health services to nongovernmental, private sector managed behavioral care entities in order to contain costs and reduce fiscal risk. A managed care tracking project funded by the Substance Abuse and Mental Health Services Administration (SAMHSA) documented that 97 managed care programs operating in 47 States include some form of mental health and drug abuse benefits. Most integrated programs (which include mental health and physical health) contract with private sector organizations, whereas carve-out arrangements for behavioral health are equally divided between private and governmental agencies. Almost all contracts place the managed care entity at financial risk through capitated arrangements whereas the providers are usually paid on an FFS basis (Babijian et al., 1992).

How persons with SMI will fare under managed care is a policy concern particularly when that care is managed by for-profit companies. Whether the cost reductions and administrative efficiencies associated with managed care in the private health sector can be realized in the public mental health sector is uncertain given that these persons have the most severe and longstanding psychiatric conditions, often overlaid with a variety of co-occurring medical and substance abuse problems, poverty, inadequate housing, and the lack of social supports. Due to the recurrent nature of their illnesses and the associated high volume of service use, persons with SMI may not fare as well under managed care programs that emphasize cost reductions, substitute high-intensity services for low-intensity services, and cost-shift or outright cost-avoid, whenever possible. Moreover, the variety of social rehabilitative needs that historically were attended to by State funding and by tacit use of insurance reimbursements may be ignored when the criteria of stringent medical necessity is applied. It has been argued that managed care arrangements under a for-profit organizational structure put persons with SMI at a disadvantage.

Studies of managed care programs in the private sector and in some public sector populations have been able to document substantial reductions in the costs of mental health treatment by reducing hospitalization and substituting less expensive and less intensive outpatient services for more costly approaches. Additionally, access to care is increased in that a larger number of enrollees in managed care plans receive mental health services compared to those in FFS plans; however, fewer receive extended treatment in managed care (Rothbard, 1999). Nevertheless, direct application of private sector models to public sector populations is likely to be unsuccessful for persons with SMI unless cost-containment goals are integrated with performance measures involving quality of care. Also, there needs to be community involvement and oversight through advising boards and consumer groups (Bartsch & Shern, 1990; Stuart & Weinrich, 1998).

However, there is reason for cautious optimism. Preliminary results of a SAMHSA multisite study on managed care for persons with SMI find little difference in satisfaction or clinical outcomes for adults with SMI in managed care versus FFS programs. Five sites have collected data using a common protocol, including common outcome measures. Additionally, the SAMHSA study offers a large amount of person-level administrative data that is equal to or greater than all that exists from individual studies that have been completed to date. Also, information on a variety of managed care programs used by persons with SMI will enable researchers to associate which mechanisms relate to access, utilization, cost, and outcomes of care.

Service System Integration

One promising organizational change is the increased attention paid to addressing service fragmentation, duplication, and restricted array of services available to address effectively the needs of adults with mental illness. Systems-level integration efforts have been aimed at five important areas outlined by Konrad (1996): information sharing and communication, cooperation and coordination, collaboration, consolidation, and integration (single authority, operates collectively, activities fully blended). Changes in these areas are hypothesized to increase the array of available services, increase access to these services, improve service-delivery patterns (e.g., fewer hospital services and more rehabilitation services), and increase service efficiency and effectiveness. One review (Salzer, Kamis-Gould, & Hadley, in press) indicates that the few system intervention demonstration projects that have been undertaken in the adult area, such as the Robert Wood Johnson Foundation Program on Chronic Mental Illness and the Access to Community Care and Effective Services and Supports (ACCESS) study, have produced changes in critical areas like access to services, the development of a continuum of services, decreased use of expensive inpatient services, enhanced service coordination and continuity of care, and consumer satisfaction. However, these interventions have not had a convincing impact on clinical outcomes. Interestingly, similar results are found for systems interventions in the children's area, such as the Fort Bragg Demonstration Project (Bickman et al., 1995) and Stark County Evaluation Project (Bickman, Noser, & Summerfelt, 1999; Bickman, Summerfelt, & Noser, 1997).

Clinical effectiveness is arguably a result of the potency of the services that are delivered. One explanation for why systems integration efforts might not impact clinical effectiveness is that delivered services are not sufficiently improved by increased integration (Goldman, Morrissey, & Ridgely, 1994; Ridgely, Morrissey, Paulson, Goldman, & Calloway, 1998; Salzer & Bickman, 1997). It is noteworthy that, to date, no system integration demonstrations have focused on ensuring that delivered services are more effective. For example, financial incentives for using evidence-based practices or performance-based contracting may lead to the use of more effective services. Such interventions are more likely to succeed in bringing about better clinical outcomes.

Changes in the Organizational Structure of the Mental Health System

From Institutional to Community Care Organizations

The closing or "downsizing" of State and county psychiatric hospitals has had profound implications for the long-term care of persons with SMI throughout the United States. Over the past 30 years, the process of deinstitutionalization has reduced the number of public psychiatric hospitals and the resident patient population. The number of State psychiatric hospitals in the United States has gone from 277 in 1970 to 231 in 1996. Patient census has gone from 186 residents per 100,000 population in 1969 to 33 residents per 100,000 in 1992 (CMHS, 1996). The decline is primarily related to downsizing rather than closing since only 46 State hospitals have actually shut their doors (NASMHPD, 1996).

As State hospitals have downsized, the share of State mental health dollars going to community care has increased to almost 50 percent (NASMHPD, 1996). This flow of dollars to community-based care has dramatically changed the site of care delivery from State institutions to local communities, where multiple providers, mostly not-for-profit outpatient programs, are responsible for bundling care around individual client needs. Case-management teams organized at the local county level under the auspices of the public mental health authorities generally are responsible for the coordination of these services.

During the first decade of deinstitutionalization, the major concern of mental health consumers, families, and psychiatric providers was related to the public sector's abandonment of persons with SMI and the safety net that supported them. Studies on the "discharge" population done during the 1970's and 1980's found community programs to be equally or slightly more effective than conventional long-term hospitalization. However, most of these findings came from experimental studies where particular interventions had been mounted for a subset of the discharged population (Braun et al., 1981; Hargreaves & Shumway, 1989) rather than with deinstitutionalization as it was actually carried out. Later studies continued to find that patients preferred life in the community rather than an institution (Barry & Crosby, 1996; Dickey, Gudeman, Hellman, Donatelle, & Grinspoon, 1981; Okin, Borus, Baer, & Jones, 1995; Okin & Pearsall, 1993; Solomon, 1992), but again, these findings were predominately based on interventions with special populations as opposed to those individuals who received no targeted follow-up services. In contrast to these special populations, a longitudinal study of formerly institutionalized patients in Vermont with no special service intervention showed that more than half of the population also achieved considerable improvement after their hospital discharge (Harding, Brooks, Ashikaga, Strauss, & Breier, 1987). Except for a small group of patients with specialized problems (Furlong, 1996), the vast majority of long-stay patients appear to be capable of maintaining or improving their level of functioning while receiving treatment in a community system.

The process of deinstitutionalization has moved into its second generation, with patients discharged during this second wave more disabled than prior cohorts. Many have special behavioral problems that make them difficult to place and maintain in community settings. However, as the majority of State mental health agency dollars are now being allocated to outpatient and residential services, and other public funding sources, predominately Medicaid, are paying for short-stay acute care psychiatric episodes in community hospitals, the ability to maintain most persons with SMI in community settings has dramatically improved.

Empirical evidence based on several studies suggests that the long-stay discharge population shows an improved satisfaction with life following discharge, with little deterioration in level of functioning. In addition, costs generally have been the same or less for discharged patients living in the community. Increased homelessness and criminal justice involvement have not been substantiated by the data for the discharged population. The desire to create a cost-effective service system that provides care in the least restrictive setting while promoting quality of life for individuals with SMI is shared by all communities. The relevant question, at this juncture, is what mix and level of service(s) should replace the former "State" hospital system, not whether long-stay psychiatric institutions should be eliminated.

Development of Community Long-Term Care Supports and Hospital Diversion

Deinstitutionalization also has spurred the development of long-term community support interventions to enhance community tenure. For example, there have been innovations in addressing the needs of persons in acute crisis. These include the development of day treatment and residential programs for those in acute crisis that have been found to produce slightly better clinical outcomes, decreased costs, and potentially less psychological trauma compared with hospitalization (e.g., Fenton, Mosher, Herrell, & Blyler, 1998; Sledge et al., 1996). Community-based acute psychiatric crisis treatment centers in homelike settings are another unique development (Warner, 1995). The basic element of this approach is to create a positive and calming therapeutic environment in which the person in distress does not feel coerced by staff or the environment.

Residential services also have emerged. Because comprehensive data for supported housing and residential services for adults with mental illness do not exist, most of what is known stems from the individual States. Provision of supported housing for persons with serious and persistent mental illness has moved into the mainstream of the service array of most public mental health systems (Mize & Abbott, 1996). These programs have developed largely on an ad hoc basis as a result of gaps in services which deinstitutionalization exposed. Elderly persons with mental illness moved into nursing homes, which were historically separate from specialty mental health systems. The use of single room occupancy (SRO) hotels peaked and then ebbed as it was increasingly recognized that the squalor so often associated with SRO hotels contributed to relapse and victimization of persons with mental illness. In many States, homes for adults, both licensed and unlicensed, evolved as a cottage industry in response to increased demand for living alternatives for the disabled population (Downs & Fox, 1993). The realization that supported housing and residential services was an ongoing and previously unmet need was slowly recognized (Ridgeway & Zipple, 1990).

The Program of Assertive Community Treatment (PACT) has been demonstrated to be an effective strategy for serving the severely mentally ill population (Bond, Miller, Krumwied, & Ward, 1988; Stein & Test, 1980, 1985). Model programs consist of multidisciplinary teams that provide continuous care to a limited number of persons with SMI (approximately 1:10 staff/client ratio). Variations of PACT have been implemented in primarily urban and semi-urban settings. Such programs promote the maintenance of clients in the least restrictive environments and actively engage the client's social network. Decreases in number of hospitalizations, length of stay, and emergency room use have been reported. Improved medication compliance, community housing maintenance, and clients' satisfaction with services have been documented. Cost savings are predominately associated with decreased hospitalization and length of stay (Dincin et al., 1993).

Rural applications of this program have been conducted with apparent success (Husted, Wentler, & Bursell, 1994; Santos et al., 1993). However, these initial studies were quasi-experimental and PACT programs have not generally been implemented in rural areas (Mechanic, 1990). Assertive community treatment programs have the potential to significantly improve the care of the rural persons with SMI. However, those factors that presently impede the provision of mental health services in rural areas also are inherent in delivering PACT programs.

Provision of a PACT program enhanced with an advanced practice psychiatric nurse and consumer provider may be a viable method of reducing disability in a setting where few treatment options exist. A program that targets the specific risk factors for relapse and physical illness would be expected to be particularly effective. Inclusion of stabilized consumers as peer supporters in the program may optimize the program's effectiveness by providing opportunities for role modeling and providing aspects of social support that are not available from formal care providers (Kane, Blank, & Hundley, 1999).

Adult Mental Health Services: Successes and Challenges

More and more efficacious clinical services have been developed over the past few decades. Particularly astounding are the advances in the development of new psychopharmacological approaches in treating a broad-range of mental illnesses. These advances are spurred by basic research that have followed technological innovations such as functional magnetic resonance imaging. Knowledge about brain physiology from basic research is being actively translated by pharmaceutical companies into new pharmacological compounds. Selective serotonin reuptake inhibitors, such as fluoxetine (Prozac), paroxetine (Paxil), and sertraline (Zoloft), have all been found to be effective in the treatment of depression and produce fewer side effects than the older monoamine oxidase inhibitor drugs. These same compounds also have been found to be efficacious in the treatment of obsessive-compulsive disorder and panic disorder. Similar advances have been made in the treatment of schizophrenia-spectrum disorders, including the development of so-called atypical antipsychotics. Atypical antipsychotics, such as clozapine (Clozaril), olanzapine (Zyprexa), and risperidone (Risperdal), are defined by their ability to decrease psychotic symptomatology with minimal extrapyramidal symptoms (Meltzer, 1995). Moreover, there is substantial evidence that clozapine offers benefits to persons who have not previously responded to other antipsychotic medications (e.g., Kane, Honigfeld, Singer, Meltzer, & Clozaril Collaborative Study Group, 1988; Rosenheck et al., 1997).

Impressive advances in psychosocial interventions have also been made. Cognitive-behavioral psychotherapy has been found to have long-lasting effects in the treatment of affective and anxiety disorders (Barlow & Lehman, 1996; Robinson, Berman, & Neimeyer, 1990). Cognitive-behavioral therapy also is being found to be beneficial in the treatment of cognitive distortions associated with psychosis (Garety, Fowler, & Kuipers, 2000). Finally, timely advances, especially in the current managed costs environment, have also been made in the development of brief psychotherapies (Garfield, 1998).

Traditional intervention approaches have focused on reducing symptoms and increasing functioning. Consumer advocacy in the mental health movement has led researchers and service providers to focus on what consumers want to achieve as a result of mental health services. This has resulted in a reorientation away from symptoms and functioning as the *sine qua non* of treatment to the valuing of quality of life, recovery, hope, empowerment, and other related outcomes. Focusing on the latter outcomes represents a shift in views of serious and persistent mental illness from a focus on progressive deterioration, especially in schizophrenia, to recovery and rehabilitation.

Psychosocial rehabilitation services have flourished as a result of new consumer-centeredness. Cognitive remediation in schizophrenia represents a very promising, yet still developing set of interventions aimed at overcoming cognitive deficits associated with this illness, such as impairment in attention, concentration, and cognitive flexibility (Bellack, Gold, & Buchanan, 1999). Employment is now an expectation for persons with serious and persistent mental illness. Early research in this area suggests that persons with mental illnesses have greater work histories than has been previously assumed (Baron & Salzer, 2000). There have been impressive developments in research, theory, and practice in vocational rehabilitation (see Cook & Razzano, 2000). One example of progress in this area includes the development and research on the Individual Placement and Support model that has been found to dramatically increase competitive employment among persons with an SMI (Drake, Becker, Clark, & Mueser, 1999).

Psychosocial rehabilitation services delivered by consumers also represent a major advance in service delivery. Consumer-delivered services enhance the sensitivity of services to consumer needs as well as build trust and rapport, especially when consumers are in more traditional professional roles such as case managers (Solomon & Draine, 1995), crisis services (Lyons, Cook, Ruth, & Karver, 1996), and vocational and employment coaches (Mowbray et al., 1994). Consumer-delivered services also include peer support programs, drop-in centers, and self-help groups that are oftentimes fully controlled and operated by consumers. Consumer-providers may offer increased sensitivity to the needs of service recipients that may enhance trust and rapport. As Mowbray and Moxley (1997, pp. 506–507) explain, "Consumers know firsthand about illness, disability, and handicaps and how to cope and how to 'spring back.' Making this knowledge accessible to other consumers may encourage recovery. Consumer service provision brings consumers together in novel ways of support. These ways can liberate the tacit knowledge that consumers often keep to themselves. The 'externalization' of recovery knowledge may be one of the most important outcomes produced by consumer service provision." There is some evidence (Davidson et al., 1999; Mowbray, Moxley, Jasper, & Howell, 1997) that the unique philosophy and approach of consumer-delivered services enhance outcomes in those domains not usually addressed by traditional mental health services, such as quality of life, recovery, and empowerment, and also draw in persons who might normally avoid traditional services as well as those who simultaneously or sequentially utilize professional services.

Another important development in service delivery is the promulgation of practice guidelines and evidence-based practices reflecting the recognition that the mental health field has developed efficacious treatments. The Agency for Healthcare Research and Quality (formerly the Agency for Health Care Policy and Research) developed one of the first practice guidelines for the treatment of adult depression (AHCPR, 1993). The clinical psychology division (Division 12: Sanderson & Woody, 1995) of the American Psychological Association established a task force aimed at producing empirically validated treatments and has documented a list of empirically validated interventions (Chambless et al., 1998; Woody & Sanderson, 1998). Other examples of the trend toward evidence-based mental health practice include the many guidelines that have come out for the treatment of schizophrenia and psychosis (American Psychiatric Association, 1997; Veterans Health Administration, 1998), and the Schizophrenia Patient Outcomes Research Team's (PORT) recommendations (Lehman, Steinwachs, & Co-Investigators, 1998a).

Treatment Barriers: Limiting Effectiveness

Efficacy-research studies provide the basis for much of our knowledge about the benefits of mental health treatments. These studies examine the extent to which a specific treatment improves outcomes under conditions in which considerable control is exerted over who receives services as well as the circumstances in which the services are delivered. Randomized clinical trials represent the classic efficacy-research approach. Patients are recruited who are homogeneous in terms of diagnosis, age, gender, and socioeconomic status, among other characteristics. Service providers are uniformly trained in the treatment modality under study and are monitored in order to ensure strict adherence to the treatment protocol. Efficacy studies examine how helpful clinical interventions can be for various problems under ideal conditions. In contrast, effectiveness research attempts to identify whether efficacious treatments improve outcomes in usual care settings involving a relatively heterogeneous sample of persons in terms of presence or absence of co-occurring conditions, illness duration, participation in treatment (e.g., motivation, keeping appointments, treatment adherence), and other client factors that might impact outcomes. Service providers also tend not to have special training in providing the specific treatment. Research efforts include experimental and quasi-experimental designs depending on local circumstances and research questions (see Hoagwood, Hibbs, Brent, & Jensen, 1995; Weisz, Donenberg, Han, & Kauneckis, 1995; and Wells, 1999 for discussions of efficacy and effectiveness research). To date, the evidence for treatment effectiveness is not impressive. For example, one review found only nine scientifically valid studies that examined the effectiveness of community-based psychotherapy services for children (Weisz & Weiss, 1993). The average effect size for these nine studies was nearly zero. "Bridging the gap between science and practice" has become the mantra in the delivery of behavioral health care services (Lamb, Greenlick, & McCarty, 1998; NIMH, 1999).

A number of factors account for the gap. The Medical Outcomes Study found that depression was both underidentified and undertreated in primary and specialty health care settings (Wells, Sturm, Sherbourne, & Meredith, 1996). Another study found that persons with major depression were treated with inadequate medication dosages in specialty mental health care settings, based on best practices for treatment developed from efficacy research (Oquendo, Malone, Ellis, Sackheim, & Mann, 1999). Investigators also have compared the treatment received by a random sample of 719 persons with schizophrenia against the PORT treatment recommendations (Lehman, Steinwachs, & Co-Investigators, 1998b). Overall, they found that current usual treatment care practices for schizophrenia do not meet current best practices based on efficacy research. These studies indicate that best practices based on efficacy studies are not fully implemented in usual care settings.

One explanation for these results is that practitioners in usual care settings are not being reached by current dissemination strategies, mostly research publications, and therefore are not using current best practices. The adoption of treatment innovations also is hindered by a number of factors unique to mental health organizations (Glaser & Backer, 1979): (1) Medical model orientation emphasizes hierarchical decisionmaking processes that inhibit broad involvement in decisionmaking; (2) Emotional reactions to change are not usually discussed in civil service agencies; (3) Organizations are open to numerous outside influences (e.g., legislature, funders, State and local mental health offices) who may veto adoption of innovations or whose views may be seriously considered when confronted with adoption; and (4) Varied interests and motivations inhibit the development of reward structures to nurture adoption. Clinicians also express a number of concerns about adopting innovations, especially based on practice guidelines (Addis, Wade, & Hatgis, 1999), including impact on therapeutic relationships, restriction of clinical innovation, and weariness about the feasibility of the guidelines for use in clinical practices.

Poor treatment adherence, including failure to keep clinical appointments, not taking medications as prescribed, and dropping out of treatment altogether, is another major factor undermining clinical effectiveness. It is clear from the literature that treatment adherence is a problem with treatment for all health conditions, especially chronic conditions (Cramer & Rosenheck, 1998). The mean level of compliance with antipsychotics is found to be 58 percent of the recommended amount of medication and 65 percent with antidepressants (Cramer & Rosenheck, 1998). Medication costs further undermine treatment effectiveness. Medication costs to consumers is a significant barrier in treatment adherence. Medication costs also undermine prescription of newer, more effective, yet costlier medications that are not on prescription formularies. Arguments for including these newer medications include the potential for cost-savings from decreased hospitalizations and crisis service use because of increased effectiveness. However, it may be the case that cost savings may be realized only for those who have been previously treatment-resistant and frequently use expensive services and not for those with limited hospitalizations (Rosenheck, Massari, & Frisman, 1993).

Summary

In this chapter we have attempted to review some of the major current advances that have taken place in the delivery of adult mental health services as the field moves into the 21st century. As this review illustrates, there is a great deal to be optimistic about. Current optimism is now fueled by these service developments, such as new medications for a wide range of mental disorders, evidence-based practice guidelines, expansion of case management services to address the needs of persons with SMI, emphasis on rehabilitation and recovery, data-based service planning, and efforts to improve service systems.

Attention is also being focused on other important areas in order to enhance the effectiveness of mental health services. For example, there is now a recognition that most mental health treatment occurs in primary care rather than specialty care settings. Efforts are under way to improve identification and treatment of mental health needs in primary care. Racial disparities in mental health service delivery have drawn attention to creating culturally sensitive services. The efforts of NAMI and other advocacy groups has helped identify stigma as a major impediment to quality of life and recovery of persons with SMI (Wahl, 1999). Innovative steps have been taken to address stigma through the use of theoretically derived interventions (Corrigan & Penn, 1999). Another exciting theoretical development is that prevention, once linked almost exclusively to work with children and adolescents, is now viewed as moving into a third generation that links prevention and treatment across the life span (National Advisory Mental Health Council Workgroup on Mental Disorders Prevention Research, 1998). This focus includes the application of prevention concepts in thwarting relapse, disability, and comorbidity among adults with serious and persistent mental illness.

However, optimism about today's advances may quickly turn to disappointment, as we saw initially with deinstitutionalization. For example, while the development and attempted implementation of evidence-based practices appear to be an advancement, previous evidence-based practices are now met with indignation. Braslow (1999) reviewed evidence-based somatic practices in the first half of the 20th century in the treatment of mental illness. He points out that these treatments, including hydrotherapy, sterilization, and lobotomies, were viewed as state-of-the-art based on current knowledge and scientific practices. Braslow encourages a dose of humility go along with any inclination to congratulate ourselves on perceived scientific and clinical progress. One important lesson from history, therefore, is that advancement in the delivery of adult mental health services requires that we adopt a stance of cautious optimism during such times as these.

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Chapter 12

Pharmacoepidemiology of Methylphenidate and Other Medications for the Treatment of ADHD

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This paper aims to describe the clinical and social characteristics associated with the treatment of Attention Deficit Hyperactivity Disorder (ADHD) in the United States during the 1990's. The objectives are the following: to review the 10-year psychopharmacologic prevalence trends for the stimulants and related medications based on community treatment patterns; to discuss the epidemiology of these treatments in terms of host (person), agent (psychotropic medications), and environment (clinical, educational, and public issues) so that variations in prevalence can be best understood; to interpret the findings broadly in light of trends in the United States regarding clinical factors, nosology, educational policy, public attitudes, and media effects; and to suggest both future research to understand the appropriateness of the increase in psychotropic medication during the past decade, and changes in clinical practice guidelines.

Research Methods

The methods used to ascertain health service utilization in the United States are far from ideal because a national health insurance system is lacking and no comprehensive system of gathering national medical treatment data exists. As a result, only a few population-based databases have been used to estimate the medication usage patterns in the usual practice setting (Zito & Safer, 1997). Consequently, analysts and the lay press often rely on marketing data, such as IMS America, a proprietary prescription survey that tracks market share principally for the pharmaceutical industry. A second source, the National Ambulatory Medical Care Survey (NAMCS), involves a national probability sampling of physician office visits; but this resource is limited, in part, because child mental health services involving prescription medications represent a very small, unreliable sample of these data. A larger, more promising source is administrative claims data from various clinical practice settings such as the Medicaid health insurance system, which covers persons with low income, impairment (Supplemental Security Income), or special placement (e.g., foster care).

In studies by the author and her colleagues, two large population data sets were obtained at three sites. Two sets of Medicaid data were selected: the first was from a Mid-Western Medicaid (MWM) State and the second was from a Mid-Atlantic Medicaid (MAM) State. The third data set included employed, insured individuals and their families. Health records of these families were gathered from a nonprofit health maintenance organization (HMO) from the northwestern region of the United States. After organizing the enrollment data from these systems and the administrative claims for reimbursement of medical and prescription services (for Medicaid) or prescription records (for the HMO), we undertook a comprehensive analysis of psychotropic medication prevalence. The analysis focused on stimulants, the psychotropic drug class most commonly used among children, and methylphenidate, the most common medication within the stimulant class. Prevalence was defined as the number of individuals with one or more prescriptions for a specific medication or medication class during the study year per 1,000 individuals enrolled in the Medicaid or the HMO health service system.

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Ten-Year Prevalence Trends for Stimulants

The trends for population-based total stimulant prevalence are illustrated in Figure 1. Stimulant use among those less than 20 years old who were treated in the HMO setting showed a 606 percent increase in use (from 0.36 percent in 1987 to 2.54 percent in 1996) while the HMO enrollment rose only 17 percent. Figure 2 shows that stimulant use among 5- to 14-year-olds in the Medicaid setting (MAM and MWM) was nearly twice that in the HMO setting. One-year stimulant prevalence was eight percent among 5- to 14-year-olds in MAM but only four percent in the HMO. These differences could be accounted for both by geographic differences and by target population differences as well as by possible prescribing practice differences.

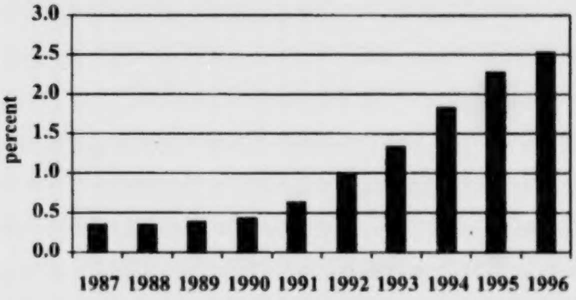
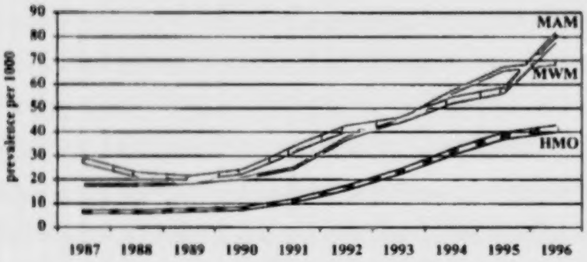


Figure 1. Ten-year trend for stimulant prevalence (percent) among youths < 20 years old in an HMO setting



MAM = Mid-Atlantic Medicaid setting
MWM = Midwestern Medicaid setting
HMO = Health Maintenance Organization setting

Figure 2. Stimulant prevalence: Ten-year trend among youths 5 to 14 years old in three health care sites

Host (Sociodemographic) Factors That Influence Stimulant Prevalence

Host factors that influence drug prevalence include age, gender, ethnicity, geographical locale, and socioeconomic status. An analysis of these factors produced the following results:

(3) As illustrated in Figure 3, age-specific prevalence differed substantially among the four age groups (0–4; 5–9; 10–14; and 15–19 years old). For example, in MWM, the lower (0–4) and upper (15–19) age groups had a very low stimulant prevalence relative to the treatment of ADHD at the typical ages of 5–14 years (7 and 12 per 1,000 for 0–4 and 15–19-year-olds, respectively). When the age rates are compared with the stimulant prevalence of 70 and 68 per 1,000 for the 5–9 and 10–14-year-olds, the difference was sixfold to tenfold. Between 1987 and 1996, there was a threefold and fivefold rate increase, respectively, among 5–9 and 10–14-year-olds. However, the increase in use during this decade was most dramatic (sixfold) for the 15–19-year-olds, suggesting a longer duration of treatment with stimulants than in the previous decade. When the preschoolers in MWM were examined by year of age, 3- and 4-year-olds had stimulant rates of 1 and 2 percent by 1996, up approximately threefold over the previous decade (Figure 4).

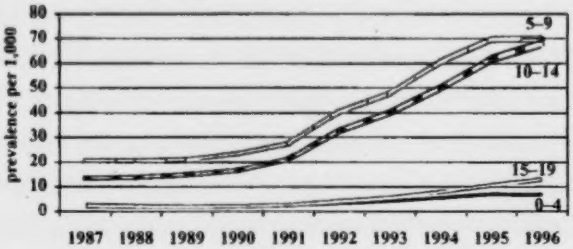


Figure 3. Age-specific stimulant prevalence (per 1,000): Ten-year trend among midwestern Medicaid youths < 20 years old

(4) Gender-specific prevalence data typically illustrate the predominance of ADHD treatment among boys. However, when male-to-female preschooler ratios were compared across the decade, there was a marked

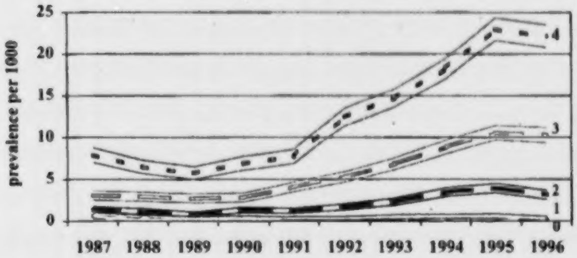


Figure 4. Ten-year trend for stimulant prevalence (per 1,000) among midwestern Medicaid preschool-age youths

change in the gender disparity. This is well illustrated among HMO youths. By 1995, the male:female ratio was half of the 1991 ratio (4.6:1 versus 9.8:1). This change suggests that girls entered treatment in increasing numbers during the 1990's.

(5) A racial disparity in stimulant use is observable from the race-specific data and this effect is influenced by age. Stimulant prevalence for Caucasian youths was approximately twice that of non-Caucasians in the MAM data source. The disparity is greatest for the oldest age group—a fact that may be consistent with differential school dropout rates among high schoolers or variable time in treatment.

(6) Geographical locale-specific prevalence rates for stimulants in 1996 showed a 5.1-fold variation across eight regions of the MAM system (Figure 5). Further analysis of race-specific and geographical locale-specific prevalence is instructive. It is important to consider the interaction of race and region, since each factor may independently influence health service utilization. To accomplish this analysis, a logistic regression model was developed with race and region as predictors of the odds of receiving methylphenidate. Caucasians were 2.6-fold more likely to receive this treatment compared with non-Caucasians, a ratio that dropped to 2.2-fold when region was accounted for in the model. The interaction of race and region was significant ($p < 0.001$), which suggests that race-specific prevalence varies according to the geographical locale. These 1996 data corroborate our earlier findings regarding Caucasian and African-American youths ages 5–14 years old who participate in Medicaid (Zito, dosReis, Safer, & Riddle, 1998).

When a comparison of Caucasian to African-American prevalence ratios was made for the leading psychopharmacologic classes of medication (stimulants, antidepressants, antipsychotics, and lithium) in relation to the leading nonpsychopharmacologic medication classes (e.g., antibiotics, topical agents, antitussives, and eye/ear/nose and throat remedies), the racial disparity was 58–79 percent greater for psychopharmacologic agents used to treat mental or behavioral disorders than for medications used to treat medical disorders. This fact suggests that cultural differences explain the lower psychopharmacologic use relative to medical drug use.

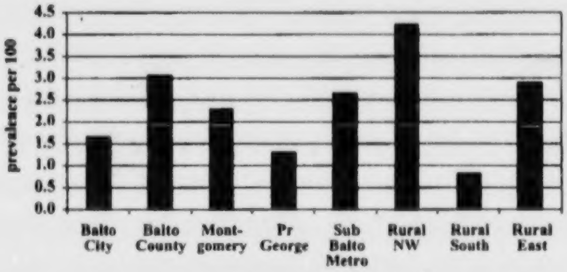


Figure 5. Stimulant prevalence according to geographical locale across eight regions of a mid-Atlantic State Medicaid system

(7) Socioeconomic factors explain several differences in the attitudes, satisfaction, and knowledge of the medication experience reported in a survey of parents with children receiving methylphenidate. Survey responses from parents in the low socioeconomic class category who were receiving service in a State-supported mental health clinic were compared with higher income parents who were participating in an advocacy and support group for ADHD. Pronounced differences were noted: school referrals were 2.5-fold more frequent for the low-income group; school-day-only treatment regimens were more likely in the low-income group; and counseling was less likely in low- or middle-income groups. Better

knowledge scores and fewer fears about medication but less satisfaction with social functioning were reported by the high-socioeconomic-class parent group (dosReis, Zito, Safer, & Soeken, 1998).

Medication and Medication-Related Factors That Influence Stimulant Prevalence

Medication and medication-related factors influence drug prevalence. Among these factors are (1) marketing and promotion; (2) physician prescribing patterns within the class of stimulants; (3) the growing use of stimulants along with ancillary medications, most of which are off-label (without indications in the Food and Drug Administration (FDA)-approved labeling information for the product package insert); and (4) Federal and local advocacy issues influencing stimulant treatment in the United States.

Results of the medication analyses suggest the following inferences. First, promotion of a combination of four amphetamine salts (Adderall®) was very successful during the late 1990's and the effect is evident in the increase in sales according to recent National Prescription Audit data. From January 1996 to March 1999, Adderall sales increased more than fortyfold and, in March 1999, exceeded prescription sales of brand-name methylphenidate (Ritalin®) by 1.5-fold. Second, changes in the proportional data within the stimulant class suggest that other amphetamines and Adderall are enjoying increased use while methylphenidate and pemoline have slightly reduced proportions (Figure 6). Recent clinical reports of serious liver toxicity associated with pemoline use (Rosh, Dellert, Narkewicz, Birnbaum, & Whittington, 1998) were largely ignored until 1999. This fact reminds us of the length of time it takes to change clinical practice when we rely on voluntary reporting of adverse medication events. Third, trends in MWM between 1987 and 1996 for selected psychopharmacologic agents show that alpha-agonists (clonidine and guanfacine) increased 53-fold while antidepressants increased 3.6 times and stimulants increased 3.7 times (Figure 7). Thus, considerable increased psychotropic medication use is observed and is likely to be explained by more youths in treatment, longer times in treatment, and the concurrent use of stimulants and ancillary medications (e.g., an alpha-agonist for insomnia related to ADHD or to stimulant use, or an antidepressant for comorbid depression).

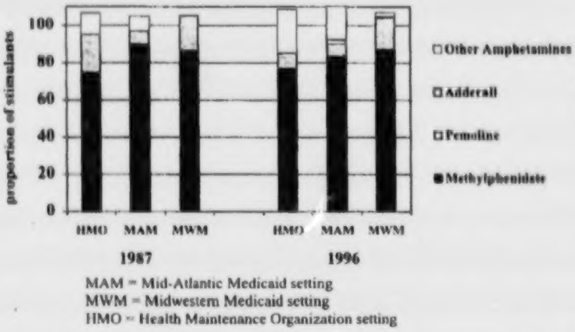
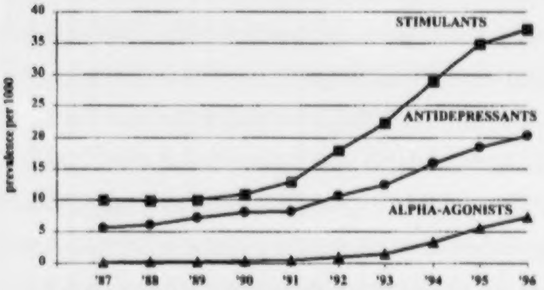


Figure 6. Proportional stimulant subclass trends for youths < 20 years old in three health care sites

Clinical and Environmental Factors That Influence Stimulant Prevalence

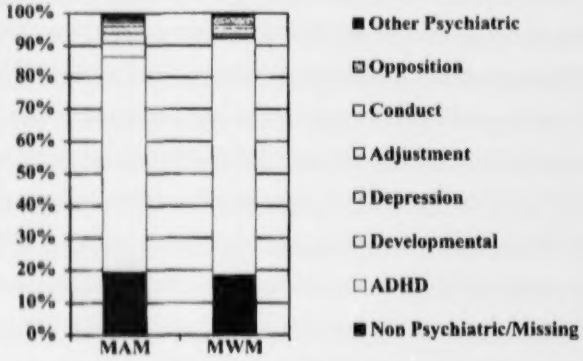
Clinical and environmental factors that influence stimulant prevalence include (1) nosological changes; (2) comorbidities and multiple medication practices; and (3) health service system changes. First, we note changes in the clinical symptoms to meet diagnostic criteria according to the latest version of the *Diagnostic and Statistical Manual* (DSM-IV; APA, 1994) relative to earlier versions and to the International Classification of Diseases. The 1994 DSM criteria make it easier for youth to meet criteria based on inattention alone (Wolraich, Hannah, Pinnock, Baumgaertel, & Brown, 1996). A second factor involves the increasing identification of comorbidities among those with ADHD. This trend partially explains the use of multiple medications, particularly antidepressants for comorbid depression. A review of the diagnoses related to stimulant use among youths in the MAM and MWM systems suggests that only 67 percent and 74 percent, respectively, of the stimulant-treated individuals had a diagnosis of ADHD (Figure 8). Nearly 20 percent of the stimulant-treated youths had no diagnosis during the study year (which may be an artifact of the cross-sectional research design) and a substantial proportion had psychiatric diagnoses other than ADHD, a finding that suggests that symptomatic treatment with stimulants is expanding among those with related psychiatric disorders. This conclusion is also supported by the MWM data comparing 1987 or 1991 with 1995 for individuals with ADHD alone and those with additional (comorbid) diagnoses (Figure 9). The disparity between

ADHD and ADHD with comorbidities was greater in 1987 than in 1995. Prominent among the comorbidities were disruptive disorders such as conduct disorder and oppositional defiant disorder, which grew 27 percent, and depression, which had a 270 percent increase in prevalence during that 9-year period (Figure 10). When those with an ADHD diagnosis alone were reviewed, the increased use of other medications from 1987 through 1995 was pronounced. Examples include a 35-fold increase in the use of alpha-agonists (clonidine or guanfacine) and a 2.4-fold increase in the use of antidepressants. Methylphenidate treatment alone proportionately decreased by 9.2 percent over the same period. Finally, when youths in MWM receiving multiple medications in 1987 were compared with those in 1995, those with two or more increased from 16 percent to 27 percent, while those receiving only one medication class decreased proportionately.



NOTE: alpha-agonists include clonidine and guanfacine

Figure 7. Ten-year trends in the prevalence (per 1,000) of key psychopharmacologic agents in a midwestern State Medicaid system



MAM = Mid-Atlantic Medicaid setting
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Figure 8. ICD-9 diagnostic groups for youths with stimulant prescription claims in 1995

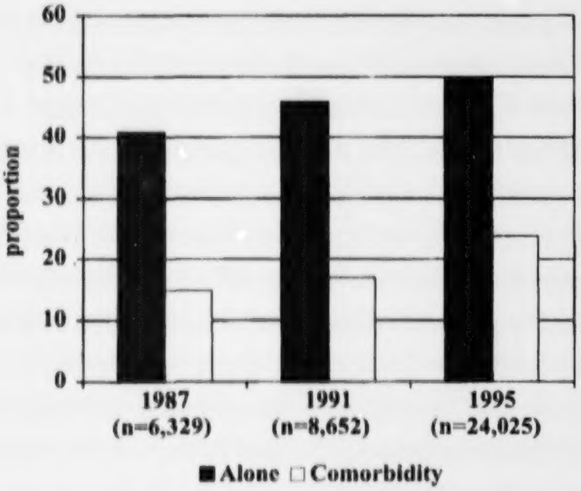

Figure 9. Proportional changes in ADHD alone and with another psychiatric comorbidity across a 9-year period

A third clinical area that explains variations in the prevalence for ADHD medication treatments concerns the treatment setting as defined by the health service system. From our 8-year analysis of NAMCS data, we reported the following findings: primary care providers (pediatrics, general practice, family practice, and internal medicine specialists) differ from psychiatrists when ADHD visits are compared to non-ADHD visits. Primary care provided 61 percent while psychiatry provided 25 percent of ADHD visits. Second, HMO insurance coverage, publicly insured (Medicaid), and privately insured (e.g., preferred provider organization insured) were significantly different with respect to ADHD and total other visits. HMO had only 11.7 percent of ADHD visits, although its share of non-ADHD visits was 17.9 percent. Private insurance had 51 percent and public insurance had 23.7 percent of ADHD visits. ADHD visits increased across the 8-year span, doubling in the latter half of the interval. Stimulant treatment as a proportion of ADHD visits increased from a mean of 62.6 percent in 1989 to a mean of 76.6 percent in 1996 (Zito et al., 1999).

Educational policy changes in 1990 expanded the identification of ADHD and led to an increased role for schools in assessing the emotional health needs of students. As a result, school staffs became more accommodating and responded more to parental demands for psychological and educational testing

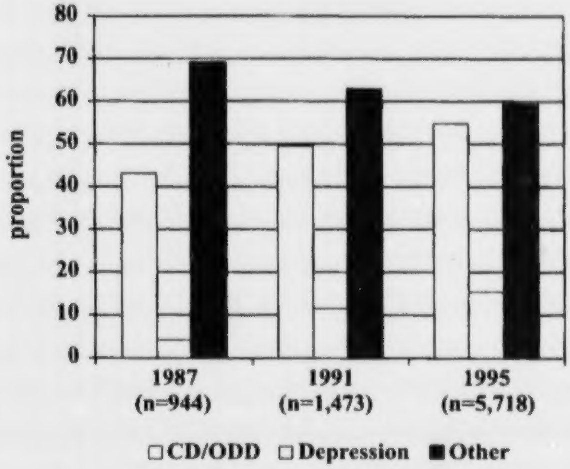

Figure 10. Proportional changes in disruptive disorders (CD/ODD), depression, and other psychiatric disorders (1987–1995)

of restless and inattentive youths for special education services, which increased their role in assessing ADHD. The role of the media has moved from largely negative reporting in the 1960's through the late 1980's to a more balanced, if not more positive, viewpoint. U.S. Federal mental health programs promoting the "decade of the brain" in the 1990's is a related development that may explain the greater acceptance of somatic treatments for ADHD by both teachers and families. Baltimore County, Maryland, public school survey data illustrate the increased duration of treatment among school-age youths from 1971 through 1997. No children from middle or high school were medicated during the school day according to the 1971 data, but 5.6 percent of middle schoolers and 1.6 percent of high schoolers were reported to be receiving medication for ADHD during the school day in April 1997 (Safer & Zito, 2000). The negative media effect is shown in the dip in stimulant prevalence during 1988 and 1989, years when newspapers in Baltimore carried details of a lawsuit against the county school system. The result was a 39 percent drop in stimulant treatment for public school students from 1987 to 1991 (Safer & Krager, 1992).

Conclusions from our findings to date are as follows: (1) there is a substantial difference in stimulant prevalence in public versus private health service systems, and (2) medication utilization for ADHD has increased substantially over the past decade. The stimulant prevalence increase is attributable to (1) expanded diagnostic criteria; (2) longer time in treatment, resulting in more teenage youths in treatment; (3) more girls in treatment; (4) a threefold increase in stimulant prevalence among 2–4 year olds (Zito et al., 2000); (5) an increased role of schools; and (6) more favorable attitudes of families and professionals. Concerns are raised in regard to (1) the appropriateness of medicating preschoolers for ADHD; (2) the long-term effectiveness of stimulants for the treatment of inattention as the sole symptom of ADHD; (3) long-term safety issues; (4) the efficacy and safety of off-label medications particularly when used in combinations for the treatment of ADHD; (5) racial and socioeconomic disparities; and (6) the role of cultural differences in the acceptability of ADHD and its treatment with medication.

Implications for Clinical Research and Clinical Practice

The appropriateness and the outcome of treatment in the usual practice setting need to be more intensively researched. Measures should include symptom improvement and consumer satisfaction as well as functional assessments in the crucial areas of academic performance, behavior, and social relations.

The results of this investigation clearly call for considerable additional research to help us understand the nature and extent of ADHD and its appropriate treatment in children and adolescents. Some key questions include: What is the prevalence of ADHD? Is it increasing or decreasing? In which age groups? Has accurate case finding improved over time with better diagnostic criteria and improved knowledge? Are children with ADHD getting appropriate treatment according to current knowledge about quality care? What is the appropriate mix of psychopharmacology and psychotherapy in the treatment of ADHD? Which children with ADHD are not getting any care at all? What is the role of the family, the school, and the community in the delivery of quality care? How can we implement new knowledge about improved assessment and treatment of ADHD? Each of these questions is of very high priority. The importance of our children to our future as a society demands no less.

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Chapter 13

Refugee Mental Health: Issues for the New Millennium

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Ten years after exuberance about the end of the Cold War prompted the United Nations (U.N.) High Commissioner for Refugees (UNHCR) to declare a "decade of voluntary repatriation," the international community is faced with a significant number of complex emergencies involving the forced movements of millions of persons. Forced migration has many causes and takes many forms. People leave because of persecution, human rights violations, repression, torture, conflict, and natural and human-made disasters. Many depart on their own initiative to escape these life-threatening situations; although, in a growing number of cases, people are driven from their homes by governments and insurgent groups intent on depopulating or shifting the ethnic, religious, or other composition of an area. Some manage to escape their countries and find temporary or permanent refuge abroad, while an alarmingly large number remain trapped inside or are forced to repatriate before the home country conditions change in any significant manner.

Forced migrants often share a traumatic past, including "exposure to war-related violence, sexual assault, torture, incarceration, genocide and the threat of personal injury and annihilation" (Friedman & Jaranson, 1994). Escaping these experiences may involve still further trauma, including the physical danger of crossing borders, prolonged periods in refugee and displaced persons camps, malnutrition and disease, armed attacks, and sexual and other violence. Many forced migrants who reach the United States and other supposedly safe countries enter without authorization and continue to risk removal to their home countries. Even those who secure a legal status that permits them to remain may face chronic unemployment, poverty, racial discrimination, lack of access to medical care, difficulties in finding safe and affordable housing, high levels of crime, and an absence of family and community networks. Their adopted country, in some cases, may have supported the repressive regime that caused their original trauma (Quiroga & Gurr, 1998).

The events of World War II produced a number of classic studies of refugee mental health, with particular focus on concentration camp survivors (Eitinger, 1959; Krupinski, Stoller, & Wallace, 1973). As humanitarian crises multiplied and grew in severity in the 1980's, new interest in refugee mental health emerged, creating a new literature on the subject. Genocide in Rwanda; ethnic cleansing in Bosnia, Kosovo, and east Timor; savage conflicts in Liberia, Sierra Leone, and Chechnya—all of these events have shown the pressing need for even more attention to the traumas faced by the survivors of these calamities. Following a review of international and U.S. trends relating to forced migration, this article summarizes the scientific literature on refugee mental health, discusses challenges to address in improving responses, and presents recommendations for future research.

International Trends in Forced Migration

The U.S. Committee for Refugees' 1999 World Refugee Survey estimates that there were 13.5 million refugees at the beginning of the year, down from almost 17 million at the beginning of the decade. Refugees have a special status in international law (USCR, 1999). The 1951 U.N. Convention Relating to the Status of Refugees defines a refugee as "a person who, owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country." Refugee status has been applied more broadly, however, to include other persons who are outside their country of origin because of armed conflict, generalized violence, foreign aggression, or other circumstances that have seriously disturbed public order, and who, therefore, require international protection.

The largest number of refugees were in the Middle East (almost 6 million), followed by Africa (3 million), Europe and South Asia (1.7 million each), the Americas (750,000), and east Asia and the Pacific (500,000). Each of the following countries originated more than 250,000 persons who were still displaced in 1999: Afghanistan, the former Yugoslavia, Iraq, Somalia, Burundi, Liberia, Sudan, Sierra Leone, and Vietnam. In addition, more than 3 million Palestinians remained displaced and eligible for aid from the U.N. Relief and Works Administration. In some of these cases, the refugees had been uprooted for decades, whereas in others they had become refugees more recently.

That the number of refugees—that is, persons outside of their home country—is at its lowest level in years does not mean that the number of persons in need of humanitarian aid and protection has reduced. There are growing numbers of conflicts in which civilians are targets of military activity as well as war crimes and crimes against humanity. Far too often, nationalism has turned rabid with ethnic group pitted against ethnic group in determining the national identity (e.g., Rwanda or the former Yugoslavia). In certain extreme cases, sovereignty itself has been compromised as no group can amass the strength or legitimacy to maintain order (e.g., Liberia or Somalia). Intense fighting erupts, with targeted attacks on civilians, massive population displacements, "ethnic cleansing" of opposing nationalities, and even genocide.

Increasingly, people in these life-threatening situations are finding avenues of escape closed to them. Even when they are able to leave, an increasing number find no country willing to accept them as refugees. As a result, there has been a large increase in the number of internally displaced persons who in the late 1990's outnumber refugees by as much as two to one. The 1999 *World Refugee Survey* lists more than 17 million internally displaced persons, but it warns that the total number may be much higher. Sudan leads the list with an estimated 4 million internally displaced persons. Angola and Colombia are estimated to have as many as 1.5 million internally displaced persons each, and Iraq, Afghanistan, Burma, and Turkey have as many as 1 million each.

The decrease in the number of refugees reflects a second phenomenon as well: the repatriation of millions of refugees to their home countries. During the 1990's, large-scale return occurred to a wide range of countries. In Africa alone, repatriation occurred in Angola, Burundi, Eritrea, Ethiopia, Liberia, Mali, Mozambique, Namibia, Rwanda, and Somalia. Other prominent repatriation destinations were Cambodia, Afghanistan, El Salvador, Nicaragua, Guatemala, and Bosnia-Herzegovina and Kosovo.

In some cases, return is voluntary because hostilities have truly ended and with peace could come repatriation and reintegration. Too often during the decade, though, refugees along with their internally displaced cousins returned to communities still wracked by warfare and conflict. A range of factors induces such return. Countries of asylum may be weary from having hosted the refugees and place pressure on them to repatriate prematurely. Donors may also reduce their assistance in the expectation that return will soon take place. The refugees themselves may wish to restake their claim to residences and businesses before others take them, or they may wish to return in time to participate in elections. Families split by hostilities may be eager for reunification. Premature return, particularly when forced, is troubling for two reasons: (1) such repatriation can endanger the refugees who may move from one insecure situation into another; and (2) forced return undermines the entire concept of asylum, that is, a place where refugees can find protection from danger and persecution.

In the post-Cold War era, the opportunities to respond to humanitarian tragedies are greater than ever before, though still difficult to seize. While the international community could provide aid and sometimes protection to those who left their countries in the decades after World War II, addressing root causes or bringing aid to victims still inside their countries was limited. Many humanitarian emergencies were triggered by surrogate Cold War conflicts, complicating matters. At the height of super-power rivalry, intervening in the internal affairs of a country allied with either the United States or the Soviet Union could have provoked a massive military response from the other. It was unlikely that the Security Council would authorize such actions.

Today, humanitarian intervention has taken place in countries as diverse as the Sudan, Iraq, Bosnia, Somalia, Haiti, and now Kosovo and East Timor. The forms of intervention range from airlifted food drops to outright military action. The results have been mixed. Aid reached otherwise inaccessible people in many of these cases, and, in some cases, peace settlements lessened the immediate reasons for flight and permitted some repatriation to take place. The root causes of displacement have not generally been addressed, however, and internally displaced populations often still remain out of reach. And, safe havens established to protect civilians have too often been vulnerable to attack, leaving civilians still victimized by those committing war crimes and crimes against humanity.

U.S. Policies

Victims of persecution, human rights violations, and conflict come to the United States in numerous ways, with and without authorization from the Government. The United States offers resettlement to refugees who are processed abroad, as well as asylum to those arriving directly. Under the Refugee Act of 1980, these statuses apply only to individuals who have been persecuted or demonstrate a well-founded fear of future persecution. Persons admitted through the resettlement system or granted asylum may adjust to permanent resident status after 1 year, which puts them on the road to citizenship.

The number of refugees resettled in the United States varies each year, determined annually by the President in consultation with Congress. Resettlement is available for refugees who are of special humanitarian concern to the United States. In the early years of the refugee program, resettlement generally was offered to refugees fleeing Communist countries, reflecting U.S. foreign policy. Since the end of the Cold War, however, the program reaches a broader segment of the refugee population, with an emphasis on protecting refugees at risk and providing durable solutions for those with no other alternatives. For fiscal year (FY) 2000, the President authorized admission of up to 90,000 refugees: 47,000 from Europe, divided among nationals of the former Yugoslavia and the former Soviet Union; 18,000 from Africa; 8,000 from east Asia; 8,000 from the near east/south Asia; 3,000 from Latin America/Caribbean; and 6,000 geographically unallocated. Actual admissions in FY 1999 numbered 85,000, including humanitarian evacuees from Kosovo.

Asylum applicants may apply directly through affirmative applications to the Immigration and Naturalization Service (INS) or through defensive applications during a removal hearing in immigration court when apprehended at a port of entry or in the interior of the United States. In affirmative cases, INS may grant asylum or refer the case to an immigration judge for further adjudication. Although there are no limits on the number of persons who can obtain asylum (with the exception of those applying under a special program for Chinese protesting China's coercive population control policies), the United States permits a maximum of 10,000 asylees to adjust to permanent residents each year. Preliminary statistics for FY 1999 indicate that about 40,000 asylum cases were filed with INS as affirmative cases. INS approved about 38 percent of the cases that reached final decisions in FY 1999. During the same period, the immigration court received almost 50,000 cases, some referred by the INS asylum office, and others applying as a result of apprehension. The immigration court approved almost 30 percent of all of the cases in which it made a final determination on the merits, granting asylum in about 6,500 cases.

Individuals fleeing conflicts and other life-threatening situations, but who have not been granted asylum, may receive Temporary Protected Status (TPS), permitting them to remain within the United States until conditions change in their country of origin. TPS is now available to persons fleeing conflicts and natural disasters in such countries/areas as Nicaragua, Honduras, Kosovo, Sudan, Sierra Leone, and Burundi. Victims of torture who do not qualify for one of these other statuses (for example, because they have committed a crime) may apply for relief from removal if they would risk future torture. The process for obtaining such relief is relatively recent, adopted when the United States passed legislation implementing commitments under the U.N. Convention against Torture.

Persons resettled in the United States or granted asylum have work authorization from the time of their admission/grant. By contrast, asylum applicants may not work legally unless the government fails to make an initial determination within 6 months of application. They are also ineligible for public assistance. Most rely on families, community members, or nonprofit agencies, or they work without authorization. Those granted TPS receive work authorization, but they are ineligible for public cash or medical assistance.

Refugees and asylees are eligible for time-limited cash and medical assistance as well as social services aimed at assisting them in adjusting to their new homes. Funded by the Office of Refugee Resettlement (ORR) in the Department of Health and Human Services, these services include English language training, employment services, and job training. Assistance and services are provided by state refugee offices, private resettlement agencies, and mutual assistance associations organized by refugees themselves.

In recognition of the traumas experienced by many refugees and asylees, ORR has an intra-agency agreement with the Refugee Mental Health Program in the Substance Abuse and Mental Health Services Administration to provide refugee mental health consultation; advice and guidance to the refugee resettlement network, State governments, and resettlement agencies; and to serve as the focal point, in the Federal Government, on mental health issues and services for refugees and torture survivors.

In addition to these programs, the United States plays an important role internationally in assisting and protecting forced migrants. The United States is one of the principal donors to the international humanitarian aid program, through its contributions to such agencies as the U.N. High Commissioner for Refugees and the U.N. Voluntary Fund for Torture Victims, as well as its support to the International Committee of the Red Cross and other nongovernmental organizations providing relief to the victims of humanitarian crises. In addition, the U.S. military has been actively involved in delivering assistance and participating in humanitarian interventions in such places as northern Iraq, Somalia, Haiti, Bosnia, and Kosovo. Regrettably, the United States has not yet signed the U.N. Convention on the Rights of the Child, which includes significant provisions that enhance protection of children caught in conflict situations.

Refugees and Mental Illness

Refugees are at particular risk not only for developing mental disorders but also for failing to receive treatment for these illnesses. Premigration, migration, and postmigration experiences all contribute to the risk. Stressors include acculturation pressures, financial and employment disadvantages, dissonance between traditional sociocultural values and the host country, intergenerational stresses, and social isolation. Legal status can affect the reality of remaining in relative safety in the United States. Often the loss of family members or separation from them can affect mental well-being.

Jablensky et al. (1994) have noted the following risk factors for determinants of poor mental health, and these factors occur throughout all phases of the refugee resettlement process. These factors are marginalization and minority factors, socioeconomic disadvantage, poor physical health, starvation and malnutrition, head trauma and injuries, collapse of social supports, mental trauma, and adaptation to host cultures. Psychological distress and impairment in psychosocial function are influenced by individual, family, cultural, and social variables (Ekblad, Ginsburg, Jansson, & Levi, 1994).

It is useful to consider the major psychosocial systems that are affected by the refugee experience, both within the individual and across the community as a whole. Ekblad and Silove (1998) suggest the following simplified framework in which five fundamental systems are threatened or disrupted: (1) The attachment system: many refugees are affected by traumatic losses and separations from close attachment figures. (2) The security system: it is common for refugees to have witnessed or encountered successive threats to the physical safety and security of themselves and those close to them. (3) The identity/role system: the refugee experience poses a major threat to the sense of identity of the individual and the group as a whole. Loss of land, possessions, and professions divest individuals of a sense of purpose and status in society. (4) The human rights system: almost all refugees have been confronted with major challenges to their human rights. These include arbitrary and unjust treatment, persecution, brutality, and, in some instances, torture. (5) The existential-meaning system: the refugee experience poses a major threat to the sense of coherence and meaning that stable civilian life usually provides for most communities.

According to Jablensky et al. (1994), the most common symptoms and signs that appear in refugees across different cultures include anxiety disorders (i.e., high levels of fear, tension, irritability, and panic), depressive disorders (i.e., sadness, anergia, anhedonia, withdrawal, apathy, guilt, and irritability), suicidal ideation and attempts, anger, aggression and violent behavior (which often finds expression in acts of spouse and child abuse), drug and alcohol abuse, paranoia, suspicion and distrust, somatization and hysteria, and sleeplessness.

Boehnlein and Kinzie (1995) have reviewed biological, psychological, and sociocultural models for recognizing, conceptualizing, and treating the psychiatric problems of traumatized refugees. After World War II, a "concentration camp syndrome," characterized by fatigue, irritability, restlessness, anxiety, and depression, was described in Jewish victims of the Nazi concentration camps (Krupinski et al., 1973). Higher rates of schizophrenia were also found (Eitinger, 1959; Krupinski et al., 1973).

Since 1975, with the escape of Southeast Asian refugees to the United States from Vietnam at the end of the Vietnam War and from the killing fields of Pol Pot in Cambodia (1975–1979), the effects of severe trauma were studied in these populations. The most frequent psychiatric diagnoses have been identified as posttraumatic stress disorder (PTSD) and major depression (Boehnlein, Kinzie, Rath, & Fleck, 1985; Kinzie et al., 1990; Kinzie, Fredrickson, Rath, & Fleck, 1984; Kinzie & Jaranson, 1998; Kinzie, Sack, Angell, & Clarke, 1989; Kinzie, Sack, Angell, & Manson, 1986; Kinzie, Tran, Breckenridge, & Bloom, 1980; Krupinski et al., 1973). In a study of Vietnamese refugees, severity of PTSD and related symptoms was directly correlated with the number of traumatic events (Smith-Fawzi et al., 1997). Although cognitive impairments are subjectively distressing and may be symptoms of PTSD, the increased frequency of head injury among victims of torture could account for some of this impairment (Goldfeld, Mollica, Pesavento, & Farone, 1988). Several other disorders and symptom complexes are common among refugees in general and especially prevalent among torture victims. One of these is the expression of emotional distress in psychological terms, or somatization (Turner & Goest-Unsworth, 1990; Westermeyer, Bouafuely, & Neider, 1989).

Although PTSD is classified as an anxiety disorder in the U.S. and international diagnostic manuals, many clinicians do not consider torture survivors and other traumatized refugees as true psychiatric patients because they may be experiencing a normal reaction to an abnormal stressor. Labeling torture symptoms as a mental disorder is seen as a medicalization of a sociopolitical problem. From another perspective, one could speculate that the biological changes occurring in posttraumatic stress override this argument (Friedman & Jaranson, 1994). These changes include abnormal sleep patterns, increased arousal of the nervous system, elevated levels of adrenaline (as in the fight-or-flight response), decreased levels of serotonin (as in depression), lower cortisol levels (although they are higher in depression), and shrinkage of part of the brain, the hippocampus (Shalev &Yehuda, 1998).

Among refugees seeking psychiatric care, damage to the central nervous system has been the most common type of biomedical condition (Begovac et al., 1992; Lunde, Rasmussen, Wagner, & Lindholm, 1981). Causes of biomedical illnesses include wounds and other physical assault; prolonged malnutrition; exposure to the elements; lack of medical care for infectious disease such as tuberculosis, HIV/AIDS, and other maladies; injury during refugee flight; and combat wounds (Walker & Jaranson, 1999). Malnutrition plus untreated medical conditions can be especially damaging (Thygesen, Herman, & Willanger, 1970).

Refugee women, who with their children account for as much as 80 percent of the refugee population, may experience additional traumas (Martin, 1991). While men are usually the active participants in war, women are often left to respond to the increasing chaos and the breakdowns in their families and communities (Farhood, Zurayk, Chaya, Meshefedjian, & Sidani, 1993; Jensen, 1994; Kaler, 1997; Lifschitz, 1975; Lyons, 1979; Murphy, 1977). In war zones, women continue to be responsible for procuring and preparing food and for caring for children, the elderly, and the ill. They face survival issues every day with massive unemployment, dramatic price increases, lack of fuel, food shortages, shelling, and sniping (Ashford & Huet-Vaughn, 1997; Mann, Drucker, Tarantola, & McCabe, 1994). After women become refugees, they often live in poverty and feel *powerless to reduce the stress in* their families (D'Avanzo, Frye, & Froman, 1994; Mollica, Wyshak, & Lavelle, 1987). Both women living in war and refugee women are often left to wonder if their husbands or children are alive or dead, leaving them in a living limbo (Agger & Jensen, 1996; Boss, 1999).

War-related stress, environmental factors, persistent grief, mourning, loneliness, and isolation tend to predispose women living in war and refugee women to sustained stress that leads to depression (Bryce, Walker, Ghorayeb, & Kanj, 1989; Bryce, Walker, & Peterson, 1989; Farhood et al., 1993; Fox, Cowell, & Johnson, 1995; Lipson, 1993). This is particularly relevant because mothers' depression and their children's adjustment are intrinsically linked (Downey, 1990; Field, 1995; Field et al., 1988; Field, Healy, Goldstein, & Guthertz, 1990; Murray, Kempton, Woolgar, & Hooper, 1993). There is evidence that children's reactions to stress mirror their family's responses. Symptoms related to trauma in mothers contribute to children's vulnerability, and the mother's level of depression has been shown to be the most important predictor of child morbidity (Apetkar & Boore, 1990; Chimienti & Abu Nasr, 1992–1993; Green et al., 1991; Punamaki, 1987).

Rape has a very high rate of acute PTSD and can lead to high rates of chronic PTSD, especially if left untreated (Foa, Rothbaum, Riggs, & Murdock, 1991). Female relatives of persecuted men are also at risk for psychological and health problems (Khamis, 1998). Children and adolescents also face special problems. They may be torture victims, either as a means of demeaning and demoralizing the children themselves or as a means of torturing their parents (Carlin, 1979; Krupinski & Burrows, 1986; Lonigan, Shannon, Taylor, Finch, & Sallee, 1994;

Westermeyer & Wahmanholm, 1996; Williams & Westermeyer, 1984). There is also evidence that children of torture survivors can have psychological consequences, despite having never been tortured themselves (Carlin, 1979; Danieli, 1998; Krupinski & Burrows, 1986; Lonigan et al., 1994; Solkoff, 1992; Westermeyer & Wahmanholm, 1996; Williams & Westermeyer, 1984).

Prevalence of Mental Illnesses Among Refugees

Since World War II, epidemiological studies and theoretical models of refugee trauma based on biomedical, sociopolitical, and ethnographic perspectives have been conducted in a variety of cultural and ethnic groups. Nonetheless, despite an increase of knowledge about the mental health problems and methods of intervention, the magnitude of the problems is not known. Recent epidemiological evidence indicates that PTSD can be identified across cultures, but it occurs in only a minority of persons exposed to mass conflict; prevalence rates vary between 4 and 20 percent, with higher rates among women (Silove, 1999). Previous studies in refugee clinic populations (Kinzie et al., 1986, 1989) and in refugee camps (Mollica et al., 1993) found a relatively high prevalence of PTSD (greater than 50 percent).

More recently, studies among non-treatment-seeking populations have proliferated; however, they have continued to focus on symptoms rather than diagnoses or have not employed rigorous population-based sampling methodology. A controlled study comparing 526 Bhutanese refugee survivors of torture in Nepal with matched controls found that torture survivors had more PTSD symptoms and had higher anxiety and depression scores (Shrestha et al., 1998). In a retrospective cohort study, 35 refugee Tibetan nuns and lay students tortured in Tibet were compared with controls (Holtz, 1998). Torture survivors again had significantly higher anxiety scores than did the nontortured cohort. Similar increased symptom rates were found in tortured Burmese political dissidents in Thailand (Allden et al., 1996). A community sample of Afghan refugee adolescents and young adults living in the United States found high rates of depression (45 percent) and PTSD (13 percent) (Mghir, Freed, Raskin, & Katon, 1995).

Amnesty International has estimated that over 150 countries around the world practice government-sponsored torture against their citizens. According to Baker (1992), between 5 percent and 35 percent of refugees have been tortured. It has been estimated that as many as 400,000 torture survivors live in the United States. The actual number of refugees in the United States who have been tortured or terrorized by their former governments is not known (Petersen, 1988), although it is clear from clinical reports and small surveys that the numbers are appreciable (Allodi & Stiasny, 1990; Eitinger, 1959; Westermeyer, 1989a). In the absence of adequate data, it is not possible to state with accuracy the total numbers of torture survivors or whether their needs are met.

Coping and Resiliency

Refugee mental health challenges may also be understood within the context of refugee resilience and coping capacity. The opportunity to freely practice traditions, beliefs, and customs and to recreate social institutions can serve as protection factors. The following protective factors have been identified (Jablensky et al., 1994): (1) availability of extended family; (2) access to employment; (3) participation in self-help groups; and (4) situational transcendence, or the ability of individuals and groups to frame their status and problems in terms that transcend the immediate situation and give it meaning (e.g., ethnic identity, cultural history). Preexisting demographic and personality factors can also affect eventual functioning and mental health (McKelvey, Webb, & Mao, 1993).

Mental health programs should stimulate these mechanisms of adaptation and foster self-help to minimize helplessness. Programs should help refugees develop coping mechanisms to replace or restore the lost protective factors offered by social networks, religion, and culture. Although it is important to initiate mental health programs during the emergency phase of the refugee crisis, this rarely happens.

Cultural Issues

According to Morris & Silove (1992), no single theory can adequately encompass the phenomenon of refugee trauma. According to Westermeyer (1987), understanding the larger sociocultural milieu in which the patient functions is crucial in distinguishing psychopathology from culture-bound responses. In assessment and treatment, excessive reliance on models of cultural determinism would be as unproductive, however, as totally disregarding cultural factors.

Although survivors of traumatic life events have similar symptoms, cultures differ in the meaning ascribed to the key concepts of trauma and torture. In some cultures, there is reluctance to express emotions or to reveal traumatic experiences, including sexual torture, until trust has been established. Consequently, forcing refugees to tell their story may be counterproductive. In such situations, indirect methods may be more useful (Mollica, 1988). Cultural attitudes toward suffering also play an important role in help-seeking and treatment response (Boehnlein & Kinzie, 1995). For instance, beliefs that suffering is inevitable or that one's life is predetermined may deter, for example, some Muslims or Buddhists from seeking health care.

Cultures traditionally may use medications or religious/traditional ceremonies for treatment and be less familiar with Western mental health interventions. Western approaches tend to emphasize the individual and minimize the importance of the sociocultural context and social networks. Of the Western approaches, the authoritative view of the doctor is more active or directive and often more acceptable (Jaranson, 1991). In group-oriented cultures, intervention-based group activities may be more relevant than individual therapies. Symbolic interventions are particularly relevant, such as supporting the grieving process for lost family members when burial is impossible. Illnesses, tension, and conflicts are resolved in traditional societies through existing in-built cultural processes. Interventions that do not recognize these factors could be detrimental (Chakraborty, 1991). Social cohesion and solidarity act as protective forces. Establishing a specialized center may undermine local individual and community responses, except for those survivors who do not receive the social support they need.

Over the past several decades, considerable attention has been devoted to matters of translation, including denotation, connotation, and semantic/technical/psychometric equivalence. This work began with Sapir and other linguists and anthropologists during the 1930's to 1950's (Hall, 1959), was continued by cultural psychologists in the 1970's and 1980's (Brislin, 1970; Butcher & Garcia, 1978; Hulin, 1987) and by psychiatrists doing cross-cultural work (Bravo, Woodbury, Canino, & Rubio-Stipec, 1993; Flaherty et al., 1988; Kinzie et al., 1982; Robins et al., 1988; Sabin, 1975; Westermeyer, 1990), and was developed further by psychiatric epidemiologists concerned with measuring and comparing psychiatric conditions in various populations during the 1980's and 1990's (Bravo, Woodbury, Canino, & Rubio-Stepic, 1993; Sartorius, 1989; Westermeyer & Janca, 1997).

Implications for Assessment and Treatment

Mainstream professionals often do not wish to know the answers to, or do not know how to ask, the difficult questions. Therapists, especially those who have been traumatized themselves, need skilled supervision to help them deal with their own issues that arise while trying to help others. The sensitive personalities of people motivated to help traumatized refugees, especially torture survivors, can find the pain and suffering distressing. This is also true for interpreters, many of whom have been traumatized themselves as refugees.

Since a trusting relationship must be developed for progress to be made, this has the highest priority beyond diagnosis or telling the trauma story. Cultural understanding is essential in choosing the methodology of the assessment. A standard Western psychiatric interview can be toxic (Mollica, 1989; Quiroga & Gurr, 1998). However, using structured interviews and diagnostic instruments as part of the assessment process can have several advantages, such as systematically recording symptoms in a way that elicits more than would otherwise be volunteered by survivors. Some can be self-administrated or administrated by even briefly trained nonprofessionals to make reasonably accurate diagnoses and to provide information for research purposes. However, there are still problems with diagnostic assessment tools, as has been shown with minor changes leading to major variations in prevalence in epidemiological surveys (Quiroga & Gurr, 1998; Regier et al., 1998), and this has important implications for assessing the need for services.

Sensitivity also is required in the physical medical examination, as some survivors can find medical procedures reminiscent of torture experience and become highly anxious and frightened (Jaranson, 1995). The individual's larger life experiences, personal values, current life situation, family situation, and external social supports are of equal importance to the medical assessments. There are problems if either the medical or the social assessment and actions dominate, as the diversity of the needs of survivors means that some will have medical treatment priorities, some psychological treatment priorities, and others practical assistance priorities.

The best psychiatric care considers the multiple health and social service needs of refugees, as well as their other special needs (Kinzie & Jaranson, 1998). Interventions may include not only standard Western treatments such as pharmacotherapy and psychotherapy, but also community approaches and traditional healing, such as cultural, religious, and political dimensions important to the refugee. Traumatized refugees may be reluctant to tell their stories due to shame, lack of trust, or fear of symptom exacerbation, and they should be allowed to reveal information at a pace that is comfortable for them (Jaranson, 1998; Jaranson et al., 1998). In addition to a complete mental status examination and symptom inventory, prior and postmigration experiences, adjustment, and disorders must be assessed (Westermeyer, 1989b). Judicious use of psychotropic medications can reduce symptoms, further the development of trust in the care-providers, and allow further assessment and psychotherapy to proceed (Jaranson, 1991). In many cultures, the medical model is more accepted or better understood than psychotherapy. Education about PTSD, depression, and psychotropic medications is important. A consistent, supportive, nonjudgmental, and culturally competent clinical approach is essential.

Since the symptoms and other effects of torture and severe trauma are modulated by bio-psychosocial factors related to the individual, a comprehensive treatment and rehabilitative approach should provide long-term flexible involvement in order to cope with relapses (Kinzie & Jaranson, 1998; Quiroga & Gurr, 1998; Shalev, Bonne, & Eth, 1996). For instance, there is evidence of a chronic fluctuating course in PTSD, which can last a lifetime if untreated (Basoglu, 1993; Basoglu, Jaranson, Mollica, & Kastrup, 1998). There are fluctuations in the revelation of, and reaction to, the trauma experiences, as the survivor's level of psychological security fluctuates with life events and life stages. Psychological treatment is very important for the more severely affected survivors, and evidence exists that social support may not be of much help unless the survivor is psychologically healthy enough to access and use it (Basoglu, 1993; Kinzie & Jaranson, 1998; Quiroga & Gurr, 1998). The family is intimately involved and may need as much assistance for indirect trauma and for dealing with the survivor.

In order for refugee mental health care to be effective, it is essential that primary health care serve as the main health service infrastructure. The challenge is to orient and train primary health care workers in mental health skills and services, including diagnosis and therapy. Mental health services should be closely coordinated with general health services, psychosocial services, and other relevant rehabilitation, social, educational, occupational, cultural, and recreational activities. Mental health services should be community based, and, wherever possible, focus on early intervention at the primary, secondary, and tertiary levels of prevention. Mental health services should be sensitive to gender and cultural issues and the needs of particular demographic groups, as well as to high-risk groups such as the physically injured and disabled, the severely mentally disabled, and survivors of extreme trauma, torture, and sexual abuse. In addition, the doctor must be sensitive to the differing ethnic responses to psychotropic medications in metabolism, nutritional status, age, smoking, and drug interactions.

According to Shalev, Bonne, and Eth (1996), the main outcome goal for therapy is increased functionality to achieve personal goals, rather than symptom reduction. However, symptom reduction may also be a goal, particularly for high levels of the positive symptoms of PTSD, major depression, or other disorders that respond to medication. These disorders require a combination of medical, psychological, social, and legal intervention.

However, the reality is that most refugees do not get formal help. It is important to train community members to recognize signs of torture and trauma and to inform torture survivors that they are not alone, that their reactions and symptoms are not unusual. The advantages of this approach, conducted by members of the community, include minimizing linguistic or cultural barriers and providing better capacity to screen people needing services. Disadvantages include the need for supervision and limited capacity for diagnosis or provision of psychotherapy.

Challenges and Opportunities

Despite the growth in expertise, experience, and knowledge about mental health issues affecting forced migrants, there are many barriers to use of this information to improve policy and programmatic responses. In part, the barriers reflect failures of communication between scientists, service providers, and policymakers. Research is not necessarily formulated or packaged in a manner that translates readily into new program designs or policy approaches.

Service providers and policymakers, often moving quickly from one crisis to another, have little time to review the research literature to assess its implications for programs or policies. Moreover, issues raised by the refugee mental health literature cross many fields of expertise, but there is considerable fragmentation of responsibility for forced migration within the United States and, even more so, within the international community.

The barriers also reflect basic realities in the delivery of services to forced migrants. Refugee and other forced movements tend to be defined as emergencies requiring emergency responses. These responses tend, in turn, to be defined in logistical terms: how many tents and how many tons of food, clothing, and medicines can be delivered in the shortest time possible. Failure to respond quickly and efficiently to these immediate needs may result in thousands of deaths. The emergency paradigm makes sense in some cases—for example, the rapid exodus and then repatriation of Kosovars—but many refugee situations would be described more properly as protracted crises, with displacement continuing for years.

Even in developed countries with the resources and expertise to respond to emergencies, large-scale forced migration presents logistical challenges. In many cases, the migrants arrive without authorization and are unwilling to present themselves to the authorities for fear of return to their home countries. Humanitarian evacuations, such as occurred from Southeast Asia in the late 1970's and Macedonia during the height of the Kosovo crisis, present particular challenges as refugees arrive, having had little opportunity for planning or preparation.

Often overlooked in responding to the emergency are the actual people who are in flight. Their nonmaterial needs are much more difficult to quantify. The after-effects of rape and witnessing murder are far more difficult to address than are the after-effects of an empty stomach. Food and shelter may serve the most immediate needs of the small child separated from his or her parents, but the emotional and psychological effects of this loss also require attention.

Even with the best will in the world to tackle these nonmaterial needs, budgets constrain options for services. In 2000, the United Nations issued a consolidated appeal for 17 complex emergencies, requesting almost $3 billion in assistance. The appeal covers all of the U.N. agencies that assist the victims of humanitarian crises—refugees, internally displaced persons, and other war-affected populations. It does not include resources for new emergencies that may occur during the course of the year. Generally, contributions fall short of the requested amount. UNHCR reported a shortfall of $185 million in its 1999 budget of $1.2 billion (which includes funds beyond what were requested in the consolidated appeals process). The situation is likely to be no better in 2000. In the United States, for example, Congress appropriated $625 million to support overseas refugee assistance programs as well as resettlement of refugees, $52.5 million less than the President requested.

In a budgetary climate in which it is difficult to raise funds for basic food, shelter, and security needs, providing funding for mental health services may appear foolhardy. From a policymaker's point of view, the literature on the psychosocial needs of refugees and other forced migrants presents a daunting picture. The prevalence of experiences that could trigger mental health problems appears staggeringly high. The potential client base for any programs could number in the millions.

Further complicating the problem is access to those needing services. Many of the most vulnerable forced migrants are internally displaced, often trapped in conflict zones and out of reach by the international community. Refugees and displaced persons who reach relative safety may be able to avail themselves of services, but life remains highly insecure for them as well. Tending to basic needs, particularly for refugee women who are often responsible for water, food, and firewood collection in addition to other household and childcare duties, often precludes participation in programs.

Even after reaching resettlement countries, refugees engage in survival activities that may mask their need for psychosocial services while restricting their ability to access programs that are available to them. Resettled refugees, in fact, have a much wider array of services available than do other forced migrants arriving in the United States having had similar experiences. As discussed above, the Federal Government provides social service grants to private agencies and State governments and has an office specifically responsible for refugee mental health issues.

By contrast, forced migrants who arrive in the United States other than through the resettlement program have access to few services. The U.S. Committee for Refugees (1999) has said:

> Psychological support for asylum seekers and survivors of torture who do not arrive under an organized resettlement program is particularly tenuous. Asylum seekers face legal uncertainty and lack access to the social services afforded to

resettled refugees, factors that compound problems associated with their lack of psychological support.

Asylum seekers often require access to such services, not only to address their mental health problems but also to underscore the credibility of their asylum claims. Mental health professionals are often asked to certify the likelihood that an applicant experienced the torture or persecution alleged in the application.

Improving responses requires actions at several different levels. The most effective responses would, of course, address the causes of forced migration through prevention strategies that protect human rights, avert conflicts, and improve economic development. Clearly, reducing the traumas that force people to migrate for safety will reduce the need for refugee mental health programs. Since such strategies require interventions far beyond the capacities of professionals working in the refugee or mental health fields, practical steps must be taken in the interim to increase access to appropriate services.

Training and preparation of all staff with responsibilities for refugee assistance and protection will be necessary if significant improvement is to be made in addressing the psychosocial needs of refugees and other forced migrants. Since all decisions made in refugee emergencies hold the potential for increasing or reducing trauma, it is important that the mental health implications of decisions be taken into account. For example, human rights monitors who interview refugees to document war crimes may trigger posttraumatic stress responses as the refugees tell of their personal experiences. In addition, a cadre of specialists may be needed for quick responses, people who can get out at the start of an emergency to interview refugees, get an index of what the problems are, design low-cost responses, and train field staff as needed. Training of refugees themselves to take responsibility for problems as they arise is also a key element of a more effective response.

Improving refugee mental health programs will also require changes in organizational roles and the deployment of institutional resources. At the international level, greater attention needs to be paid to determining which agencies among those responsible for refugees and forced migrants should take the lead regarding mental health issues. In addition to the UNHCR, the World Health Organization and UNICEF (U.N. International Children's Emergency Fund) have mandates in this area. Ultimately, addressing more broadly the mental health and psychosocial needs of refugees will require financial resources. Through the consolidated appeal process, the U.N. agencies should determine what additional funding will be needed to respond more effectively.

Within the United States, most programs designed to care for new Americans have faced overwhelming obstacles to survival. Although Federal law requires health care organizations to provide interpreters for non-English-speaking patients, enforcement has been inconsistent. Interpretation increases the complexity and cost of providing health care services. Few programs have survived by depending solely upon third-party reimbursement, and local, State, Federal, or private foundation funding is usually required for sustainability. Realizing these obstacles, the U.S. Congress passed the Torture Victims Relief Act in October 1998, providing funding for torture rehabilitation programs both in the United States and abroad. However, no comparable Federal legislation to care for refugees and asylum seekers traumatized in other ways has been passed.

Research Priorities

According to Rosenheck and Fontana (1999), research on the delivery of health care services for PTSD can be thought of as addressing the following three goals:

- *Severity/Burden of Disease.* Service use, along with epidemiological data on disease prevalence, is an indicator of the burden of disease on the general population and its economic consequences. Kessler et al. (1999), in the National Comorbidity Survey, shows that PTSD is associated with nearly the highest rate of service use, and, by implication, the highest per-capita cost of any mental health disorder. This shows the central importance of PTSD for the public's mental health. Rosenheck and Fontana also conclude that PTSD is also associated with high levels of use of non-mental-health services.

- *Access to Care.* Studies of service utilization provide information on the accessibility of services (i.e., the success or failure of the health care system to address the needs of its target population). Rosenheck and Fontana found that survivors of human-made disasters were reluctant to use mental health services because of the fear that painful memories would be aroused.

- *Outcome, Cost, and Value.* Studies of service utilization are important to simultaneously evaluate the effectiveness and cost of services (i.e., their ultimate value to the public). Although medical care has traditionally focused its research efforts on individual patients and illnesses, new research methods and perspectives are increasingly operationalized to correct these deficiencies.

Before starting a study, it is of crucial importance to consider theoretical dilemmas (i.e. emic–etic perspectives regarding both diagnostic and outcome measures following severe but different traumatic life events). Researchers should also clarify the definitions of key concepts such as refugee versus immigrant; differences in ethnic, educational, religious, and socioeconomic backgrounds; and reasons for immigration.

It must also be kept in mind that research conducted with refugees from countries where ethnic conflicts are still active can easily be affected by such conflicts. Further, from an ethical point of view it is important that the refugee who is to be interviewed does not have the feeling of being investigated by the police or courts. Time should be allowed for the necessary trust to develop. Before starting, the responsibility for various parts of the work should be clarified. The study site should be located close to the researchers, and a frequent dialogue of training and supervision take place between the researchers and practitioners, minimizing the need for gatekeepers.

The cultural and language competence of the interviewer is important in the contact with the interviewees, but this competence is easily transformed into difficulties when transference/countertransference processes occur. Transcultural validity, the concept of equivalence, and appropriate methods, with their limitations, are of concern. An integration of quantitative and qualitative methods provides the best possibility for understanding the complex issues affecting the mental health of refugees. The study of methods to avoid burnout or vicarious traumatization among mental health providers is also relevant.

Since funding is scarce, identifying effective rehabilitation models is essential. Controlled randomized clinical trials are needed in order to develop brief and cost-effective mental health programs for refugees. Of pressing importance are clinical outcome studies, few of which exist (Mollica et al., 1990) because of the lack of control groups, definitions of diagnostic criteria, validation of assessment instruments, and many other obstacles. A set of standards and measures of outcome should be included in research designs. International collaborative cross-cultural studies would facilitate research on policy studies, methodological issues, technical issues in refugee health care, and the generic and culture-specific risk and resilience responses to traumatic life events and PTSD.

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Section 4: Key Elements of the National Statistical Picture

Chapter 14

Highlights of Organized Mental Health Services in 1998 and Major National and State Trends

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During the 28 years leading up to 1998, significant changes occurred in the number, capacity, structure, and operation of organizations providing mental health services in the United States. This chapter describes some of the changes that have occurred nationally in the delivery system, analyzes some of the policy implications of these changes for future planning purposes, and presents some comparative data by State.

The source of the organizational data presented in this chapter is the periodic Survey of Mental Health Organizations and General Hospital Mental Health Services (SMHO; Appendix A), conducted by the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services (CMHS). The Survey is a complete enumeration of all specialty mental health organizations and separate psychiatric services of non-Federal general hospitals, together with a sample survey, that collects descriptive information on the number and types of services, capacity (i.e., number of beds), volume of services (i.e., numbers of episodes, additions, and resident patients), staffing, expenditures, and sources of revenue.

The types of mental health organizations covered include State and county mental hospitals, private psychiatric hospitals, non-Federal general hospitals with separate psychiatric services, Department of Veterans Affairs (VA) medical centers, residential treatment centers for emotionally disturbed children (RTCs), and "all other mental health organizations," which include multiservice mental health organizations, freestanding psychiatric outpatient clinics, and partial care psychiatric organizations. Definitions of these organization types are given in Appendix A.

This chapter examines four organizational foci of the specialty mental health care sector:

- Availability—the number of each type of organization and the number of organizations providing mental health services in 24-hour care (i.e., inpatient including residential care) and in less than 24-hour care (i.e., outpatient and partial care), as well as the capacity of these services (i.e., number of 24-hour hospital beds).
- Volume of services—the actual level of services provided by each organization type. Aggregate measures of service utilization are shown for 24-hour hospital services, including residential treatment care, and for less than 24-hour services (i.e., number of additions, number of resident patients, average daily census).

- Staffing—the number of full-time equivalent (FTE) personnel by staff discipline employed by each organization type.
- Finances—the expenditures made by each organization type to provide and administer services, and the amount and sources of the revenues received by these organizations.

Availability of Services

Number of Organizations and Service Settings

The total number of mental health organizations in the United States[1] increased between 1970 and 1998 from 3,005 to 5,722 (Table 1). Almost all of this increase occurred as a result of gains in the number of private psychiatric hospitals, separate psychiatric services of non-Federal general hospitals, RTCs, and "all other organizations," since the number of State and county mental hospitals (hereafter referred to as State mental hospitals) and freestanding outpatient clinics (included in the rubric "all other mental health organizations") decreased, and the number of VA medical centers with psychiatric services remained relatively unchanged. Although private psychiatric hospitals in 1998 still numbered more than twice that of 1970, this was a substantial decline from their 1992 peak.

Along with the overall increase in mental health organizations, the number of organizations providing services in various treatment settings also increased. For example, between 1970 and 1994, the number providing 24-hour service more than doubled from 1,734 to 3,827.[2] This number declined only slightly between 1994 and 1998, to 3,729. The number providing less than 24-hour services also rose consistently between 1970 and 1998, from 2,156 to 4,387.[3]

Number of Psychiatric Beds

While the number of mental health organizations providing 24-hour services (hospital inpatient and residential treatment) more than doubled in the United States over the 28-year period, the number of psychiatric beds provided by these organizations decreased by half, from 524,878 in 1970 to 261,903 in 1998 (Table 2). The corresponding bed rates per 100,000 civilian population dropped proportionately more in the same period from 264 to 97. Beds in State mental hospitals accounted for most of this precipitous drop, with their number representing only 24 percent of all psychiatric beds in 1998, compared to almost 80 percent in 1970 (Figure 1).

Trends in bed rates for specific organization types, shown in Figure 2, indicate that the rates for private psychiatric hospitals and non-Federal general hospital psychiatric inpatient services increased substantially between 1970 and 1990, with the greatest growth occurring between 1980 and 1990; since 1990, bed rates have been stable for non-Federal general hospitals, but have declined for private psychiatric hospitals, although the latter remain above the rates for 1980 and earlier. The rates for RTCs were nearly flat throughout the 1970–98 period, while the rate for State mental hospitals and VA psychiatric organizations decreased substantially. The greatest increase, from less than 1 to 24, occurred in the "all other organizations" category, which includes the multiservice organizations.

It should be noted that in each of the years shown, the number of "scatter" beds in non-Federal general hospitals has been excluded. Scatter beds are those that are commingled with medical-surgical beds in non-Federal general hospitals as distinguished from those that are in the separate psychiatric services of these hospitals.

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[1] Throughout this chapter, including the tables, "United States" includes the 50 States and the District of Columbia. SMHO also covers facilities in Puerto Rico and the territories.

[2] Before 1994, residential supportive care was excluded from the data. In 1994, data for residential supportive care were included. However, this should have no material effect on the data except for "multiservice mental health organizations."

[3] In 1994, no distinction was made between outpatient and partial care on the Inventory, and the categories "24-hour hospital care" and "less than 24-hour care" were used. As a result, data for all years before 1994 have been restated to show the combined outpatient and partial care totals.

Table 1. Number of mental health organizations by type of organization: United States, selected years, 1970–98[1]

Type of organization	1970	1976	1980	1986	1990	1992	1994	1998
Number of mental health organizations								
All organizations	3,005	3,480	3,727	4,747	5,284	5,498	5,392	5,722
State and county mental hospitals	310	303	280	285	273	273	256	229
Private psychiatric hospitals	150	182	184	314	462	475	430	348
Non-Federal general hospitals with separate psychiatric services	797	870	923	1,351	1,674	1,616	1,612	1,707
VA medical centers[2]	115	126	136	139	141	162	161	145
Federally funded community mental health centers	196	517	691	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	261	331	368	437	501	497	459	461
All other mental health organizations[3]	1,176	1,151	1,145	2,221	2,233	2,457	2,474	2,832
Number with 24-hour hospital and residential treatment service								
All organizations	1,734	2,273	2,526	3,039	3,430	3,415	3,827	3,729
State and county mental hospitals	310	303	280	285	273	273	256	229
Private psychiatric hospitals	150	182	184	314	462	475	430	348
Non-Federal general hospitals with separate psychiatric services	664	791	843	1,287	1,571	1,517	1,531	1,593
VA medical centers[2]	110	112	121	124	130	133	135	123
Federally funded community mental health centers	196	517	691	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	261	331	368	437	501	497	459	461
All other mental health organizations[3]	43	37	39	592	493	520	1,016	975
Number with less than 24-hour care[4]								
All organizations	2,156	2,318	2,431	3,146	3,189	3,390	4,087	4,387
State and county mental hospitals	195	147	100	83	84	75	70	60
Private psychiatric hospitals	100	60	54	114	176	198	347	263
Non-Federal general hospitals with separate psychiatric services	376	303	299	497	633	618	875	965
VA medical centers[2]	100	113	127	137	141	161	148	129
Federally funded community mental health centers	196	517	691	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	48	57	68	99	163	167	227	210
All other mental health organizations[3]	1,141	1,121	1,092	2,016	1,992	2,171	2,420	2,760

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services.

[1] Some organizations were reclassified as a result of changes in reporting procedures and definitions. For 1979–80, comparable data were not available for certain organization types and data for either an earlier or a later period were substituted. These factors influence the comparability of 1980, 1986, 1990, 1992, and 1994 data with those of earlier years.

[2] Includes Department of Veterans Affairs (formerly Veterans Administration) (VA) neuropsychiatric hospitals, VA general hospital psychiatric services, and VA psychiatric outpatient clinics.

[3] Includes freestanding psychiatric outpatient clinics, partial care organizations, and multiservice mental health organizations. Multiservice mental health organizations were redefined in 1984.

[4] The 1994 survey format was changed and partial care is now included with outpatient, and together are called "less than 24-hour care."

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Table 2. Number, percent distribution, and rate[1] of 24-hour hospital and residential treatment beds, by type of mental health organization: United States, selected years, 1970–98[2]

Type of organization	1970	1976	1980	1986	1990	1992	1994[5]	1998
	Number of 24-hour hospital and residential treatment beds							
All organizations	524,878	338,963	274,713	267,613	272,253	270,867	290,604	261,903
State and county mental hospitals	413,066	222,202	156,482	119,033	98,789	93,058	81,911	63,525
Private psychiatric hospitals	14,295	16,091	17,157	30,201	44,871	43,684	42,399	33,635
Non-Federal general hospitals with separate psychiatric services	22,394	28,706	29,384	45,808	53,479	52,059	52,984	54,266
VA medical centers[3]	50,688	35,913	33,796	26,874	21,712	22,466	21,146	13,301
Federally funded community mental health centers	8,108	17,029	16,264	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	15,129	18,029	20,197	24,547	29,756	30,089	32,110	33,483
All other organizations[4]	1,198	993	1,433	21,150	23,646	29,511	60,054	63,693
	Percent distribution of 24-hour hospital and residential treatment beds							
All organizations	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
State and county mental hospitals	78.7	65.6	57.0	44.5	36.3	34.4	28.2	24.3
Private psychiatric hospitals	2.7	4.7	6.2	11.3	16.5	16.1	14.6	12.8
Non-Federal general hospitals with separate psychiatric services	4.3	8.5	10.7	17.1	19.6	19.2	18.2	20.7
VA medical centers[3]	9.7	10.6	12.3	10.0	8.0	8.3	7.3	5.1
Federally funded community mental health centers	1.5	5.0	5.9	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	2.9	5.3	7.4	9.2	10.9	11.1	11.0	12.8
All other organizations[4]	0.2	0.3	0.5	7.9	8.7	10.9	20.7	24.3
	24-hour hospital and residential treatment beds per 100,000 civilian population							
All organizations	263.6	160.3	124.3	111.7	111.6	107.5	112.1	97.4
State and county mental hospitals	207.4	105.1	70.2	49.7	40.5	36.9	31.6	23.6
Private psychiatric hospitals	7.2	7.6	7.7	12.6	18.4	17.3	16.4	12.5
Non-Federal general hospitals with separate psychiatric services	11.2	13.6	13.7	19.1	21.9	20.7	20.4	20.2
VA medical centers[3]	25.5	17.0	15.7	11.2	8.9	8.9	8.2	4.9
Federally funded community mental health centers	4.1	8.0	7.3	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	7.6	8.5	9.1	10.3	12.2	11.9	12.4	12.4
All other organizations[4]	0.6	0.5	0.6	8.8	9.7	11.7	23.2	23.7

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services. Sums of percentages or rates for institution types might not equal 100 percent or the overall rate because of rounding.

[1] The population used in the calculation of these rates is the July 1 civilian population of the United States for the respective years.

[2] Some organizations were reclassified as a result of changes in reporting procedures and definitions. For 1979–80, comparable data were not available for certain organization types and data for either an earlier or a later period were substituted. These factors influence the comparability of 1980, 1986, 1990, 1992, and 1994 data with those of earlier years.

[3] Includes Department of Veterans Affairs (formerly Veterans Administration) (VA) neuropsychiatric hospitals, VA general hospital psychiatric services, and VA psychiatric outpatient clinics.

[4] Includes freestanding psychiatric outpatient clinics, partial care organizations, and multiservice mental health organizations. Multiservice mental health organizations were redefined in 1984.

[5] The data for 1994 include residential supportive additions that were excluded in previous years. This is not new material except for the category "all other organizations."

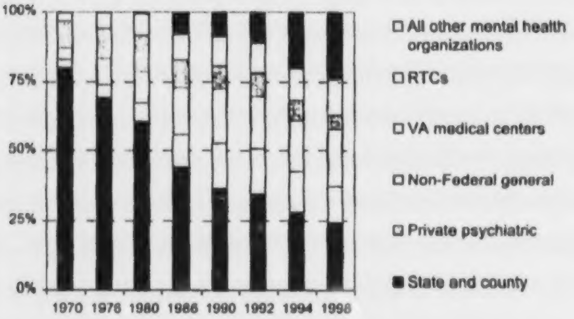
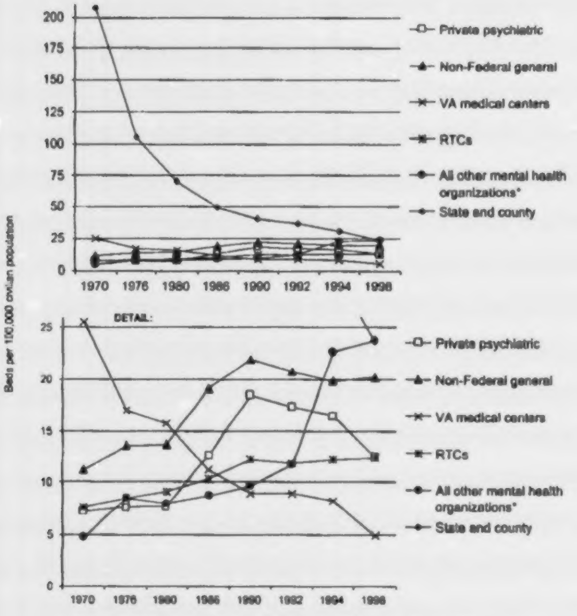


Figure 1. Percent distribution of 24-hour hospital and residential treatment beds, by organization type, 1970–98



*Includes Federally funded community mental health centers in 1970, 1976, and 1980.

Figure 2. Rate of 24-hour hospital and residential treatment beds, by type of mental health organization: United States, selected years, 1970–98

Volume of Services

Additions to 24-Hour Hospital and Residential Services

The number of 24-hour hospital and residential treatment additions increased steadily between 1969 and 1998, from 1,282,698 to 2,313,594, with a corresponding increase in the addition rate from 644 per 100,000 civilian population in 1969 to 875 in 1994, with a slight decrease to 860 in 1998 (Table 3). In 1969, nearly three-quarters of the 24-hour hospital patients were about evenly divided between State mental hospitals and the psychiatric services of non-Federal general hospitals. A constant and precipitous decline in the number of additions and the addition rate to State mental hospitals during the 1969–98 period, accompanied by substantial increases in these measures for the 24-hour services at non-Federal general hospitals and private psychiatric hospitals, especially after 1979, shifted the volume of patient additions to these latter two organization types. By 1998, non-Federal general hospital inpatient psychiatric services accounted for nearly 50 percent and private psychiatric hospitals about 21 percent of all inpatient additions, while the proportion of State mental hospital inpatient additions dropped to 9 percent (Figure 3). Among the other mental health organizations, RTCs showed a more or less steady gain in additions between 1969 and 1990, dipped in 1992, and then recovered to exceed the 1990 level in 1994–98. Since 1979, VA inpatient additions as a proportion of all additions have been decreasing, from 12 percent to 6 percent in 1998.

Additions to Less Than 24-Hour Care Services

In the 1969–98 period, the number of less than 24-hour service additions to mental health organizations in the United States more than tripled, from 1,202,098 to 3,967,019, and the corresponding addition rate per 100,000 civilian population more than doubled from 604 to 1,475 (Table 4). Much of this increase occurred during the 1970's, when the number and rate of outpatient additions increased substantially in the freestanding psychiatric outpatient clinics and in the "all other organization" grouping encompassing federally funded CMHCs and other multiservice mental health organizations (Figure 4). Since 1980, the overall increase in additions to

Table 3. Number, percent distribution, and rate[1] of 24-hour hospital and residential treatment additions, by type of mental health organization: United States, selected years 1969–98[2]

Type of organization	1969	1975	1979	1986	1990	1992	1994[5]	1998
	Number of hospital and residential treatment additions							
All organizations	1,282,698	1,556,978	1,541,659	1,819,189	2,035,245	2,092,062	2,266,600	2,313,594
State and county mental hospitals	486,661	433,529	383,323	332,884	276,231	275,382	238,431	205,624
Private psychiatric hospitals	92,056	125,529	140,831	234,663	406,522	469,827	485,001	481,461
Non-Federal general hospitals with separate psychiatric services	478,000	543,731	551,190	849,306	959,893	951,121	1,066,547	1,145,495
VA medical centers[3]	135,217	180,701	180,416	179,964	198,111	180,529	173,282	144,458
Federally funded community mental health centers	59,730	236,226	246,409	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	7,596	12,022	15,453	24,511	41,588	36,388	46,704	48,841
All other organizations[4]	23,438	25,240	24,037	197,861	152,900	178,815	256,635	287,715
	Percent distribution of hospital and residential treatment additions							
All organizations	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
State and county mental hospitals	37.9	27.8	24.9	18.3	13.6	13.2	10.5	8.9
Private psychiatric hospitals	7.2	8.1	9.1	12.9	20.0	22.5	21.4	20.8
Non-Federal general hospitals with separate psychiatric services	37.3	34.9	35.8	46.7	47.2	45.5	47.1	49.5
VA medical centers[3]	10.5	11.6	11.7	9.9	9.7	8.6	7.6	6.2
Federally funded community mental health centers	4.7	15.2	16.0	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	0.6	0.8	1.0	1.3	2.0	1.7	2.1	2.1
All other organizations[4]	1.8	1.6	1.6	10.9	7.5	8.5	11.3	12.4
	Hospital and residential treatment additions per 100,000 civilian population							
All organizations	644.2	736.5	704.2	759.9	833.7	830.1	874.6	860.0
State and county mental hospitals	244.4	205.1	172.0	139.1	113.2	109.3	92.0	76.4
Private psychiatric hospitals	46.2	59.4	63.2	98.0	166.5	186.4	187.1	179.0
Non-Federal general hospitals with separate psychiatric services	240.1	257.2	256.7	354.8	393.2	377.4	411.5	425.8
VA medical centers[3]	67.9	85.5	84.0	75.1	81.2	71.6	66.9	53.7
Federally funded community mental health centers	30.0	111.7	110.6	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	3.8	5.7	6.9	10.2	17.0	14.4	18.0	18.2
All other organizations[4]	11.8	11.9	10.8	82.7	62.6	70.9	99.0	106.9

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services. Sums of percentages or rates for institution types might not equal 100 percent or the overall rate because of rounding.

[1] The population used in the calculation of these rates is the July 1 civilian popluation of the United States for the respective years.

[2] Some organizations were reclassified as a result of changes in reporting procedures and definitions. For 1979–80, comparable data were not available for certain organization types and data for either an earlier or a later period were substituted. These factors influence the comparability of 1980, 1986, 1990, 1992, and 1994 data with those of earlier years.

[3] Includes Department of Veterans Affairs (formerly Veterans Administration) (VA) neuropsychiatric hospitals, VA general hospital psychiatric services, and VA psychiatric outpatient clinics.

[4] Includes freestanding psychiatric outpatient clinics, partial care organizations, and multiservice mental health organizations. Multiservice mental health organizations were redefined in 1984.

[5] The data for 1994 include residential supportive additions that were excluded in previous years. This is not material except for the category "all other organizations."

Table 4. Number, percent distribution, and rate[1] of less than 24-hour care additions, by type of mental health organization: United States, selected years, 1969–98[2]

Type of organization	1969	1975	1979	1986	1990	1992	1994	1998
				Number of less than 24-hour care additions				
All organizations	1,202,098	2,453,105	2,807,058	2,955,337	3,298,473	3,164,437	3,516,403	3,967,019
State and county mental hospitals	174,737	160,283	91,727	67,986	48,211	49,609	41,759	41,692
Private psychiatric hospitals	28,412	36,044	33,471	132,175	163,164	206,169	213,566	226,325
Non-Federal general hospitals with separate psychiatric services	188,652	268,881	237,008	532,960	658,567	479,596	497,523	614,866
VA medical centers[3]	20,290	101,723	127,221	132,589	183,621	158,982	132,417	143,338
Federally funded community mental health centers	189,670	878,730	1,320,637	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	8,591	23,215	22,172	67,344	99,503	121,131	167,344	153,051
All other mental health organizations[4]	591,746	984,229	974,822	2,022,283	2,145,407	2,148,950	2,463,794	2,787,747
				Percent distribution of less than 24-hour care additions				
All organizations	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
State and county mental hospitals	14.5	6.5	3.3	2.3	1.5	1.6	1.2	1.1
Private psychiatric hospitals	2.4	1.5	1.2	4.5	4.9	6.5	6.1	5.7
Non-Federal general hospitals with separate psychiatric services	15.7	11.0	8.4	18.0	20.0	15.2	14.1	15.5
VA medical centers[3]	1.7	4.1	4.5	4.5	5.6	5.0	3.8	3.6
Federally funded community mental health centers	15.8	35.8	47.0	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	0.7	0.9	0.8	2.3	3.0	3.8	4.8	3.9
All other mental health organizations[4]	49.2	40.1	34.7	68.4	65.0	67.9	70.1	70.3
				Less than 24-hour care additions per 100,000 civilian population				
All organizations	603.8	1,142.7	1,236.6	1,233.4	1,352.4	1,255.2	1,356.8	1,474.6
State and county mental hospitals	87.8	74.7	40.4	28.4	19.8	19.7	16.1	15.5
Private psychiatric hospitals	14.3	16.8	14.7	55.2	66.9	81.8	82.4	84.1
Non-Federal general hospitals with separate psychiatric services	94.8	125.3	104.4	222.4	270.0	190.2	192.0	228.6
VA medical centers[3]	10.2	47.4	56.0	55.3	75.3	63.1	51.1	53.3
Federally funded community mental health centers	95.3	409.3	581.8	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	4.3	10.8	9.8	28.1	40.8	48.0	64.6	56.9
All other mental health organizations[4]	297.2	458.5	429.4	844.0	879.6	852.4	950.7	1,036.2

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services. Sums of percentages or rates for institution types might not equal 100 percent or the overall rate because of rounding.

[1] The population used in the calculation of these rates is the July 1 civilian popluation of the United States for the respective years. Data for 1969–92 are the summation of partial care and outpatient care additions. The 1994 survey format was changed and partial care is now included with outpatient, and together are called "less than 24-hour care."

[2] Some organizations were reclassified as a result of changes in reporting procedures and definitions. For 1979–80, comparable data were not available for certain organization types and data for either an earlier or a later period were substituted. These factors influence the comparability of 1980, 1986, 1990, 1992, and 1994 data with those of earlier years.

[3] Includes Department of Veterans Affairs (formerly Veterans Administration) (VA) neuropsychiatric hospitals, VA general hospital psychiatric services, and VA psychiatric outpatient clinics.

[4] Includes freestanding psychiatric outpatient clinics, partial care organizations, and multiservice mental health organizations. Multiservice mental health organizations were redefined in 1984.

Table 5. Number, percent distribution, and rate[1] of 24-hour hospital and residential treatment residents, by type of mental health organization: United States, selected years, 1969–98[2]

Type of organization	1969	1975	1979	1986	1990	1992	1994[5]	1998
Number of hospital and residential treatment residents at end of year								
All organizations	471,451	284,158	230,186	237,845	226,953	214,714	236,110	215,798
State and county mental hospitals	369,969	193,436	140,355	111,135	90,572	83,180	72,096	56,955
Private psychiatric hospitals	10,963	11,576	12,921	24,591	32,268	24,053	26,519	21,478
Non-Federal general hospitals with psychiatric services	17,808	18,851	18,753	34,474	38,327	35,611	35,841	37,002
VA medical centers[3]	51,696	31,850	28,693	24,322	17,233	18,531	18,019	10,882
Federally funded community mental health centers	5,270	10,818	10,112	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	13,489	16,307	18,276	23,171	27,785	27,751	29,493	30,370
All other organizations[4]	2,256	1,320	1,076	20,152	20,768	25,588	54,142	59,111
Percent distributions of hospital and residential treatment residents								
All organizations	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
State and county mental hospitals	78.5	68.1	61.0	46.7	39.9	38.7	30.5	26.4
Private psychiatric hospitals	2.3	4.1	5.6	10.3	14.2	11.2	11.2	10.0
Non-Federal general hospitals with psychiatric services	3.8	6.6	8.1	14.5	16.9	16.6	15.2	17.1
VA medical centers[3]	11.0	11.2	12.5	10.2	7.6	8.6	7.6	5.0
Federally funded community mental health centers	1.1	3.8	4.4	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	2.9	5.7	7.9	9.7	12.2	12.9	12.5	14.1
All other organizations[4]	0.5	0.5	0.5	8.5	9.2	11.9	22.9	27.4
Hospital and residential treatment residents per 100,000 civilian population								
All organizations	236.8	134.4	103.9	99.6	93.0	85.2	91.1	80.2
State and county mental hospitals	185.8	91.5	63.0	46.5	37.1	33.0	27.8	21.2
Private psychiatric hospitals	5.5	5.5	5.8	10.3	13.2	9.5	10.2	8.0
Non-Federal general hospitals with psychiatric services	8.9	8.9	8.6	14.4	15.7	14.1	13.8	13.8
VA medical centers[3]	26.0	15.1	13.3	10.2	7.1	7.4	7.0	4.0
Federally funded community mental health centers.	2.7	5.1	4.5	—	—	—	—	—
Residential treatment centers for emotionally disturbed children	6.8	7.7	8.2	9.7	11.4	11.0	11.4	11.3
All other organizations[4]	1.1	0.6	0.5	8.5	8.5	10.2	20.9	22.0

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services. Sums of percentages or rates for institution types might not equal 100 percent or the overall rate because of rounding.

[1] The population used in the calculation of these rates is the July 1 civilian popluation of the United States for the respective years.

[2] Some organizations were reclassified as a result of changes in reporting procedures and definitions. For 1979–80, comparable data were not available for certain organization types and data for either an earlier or a later period were substituted. These factors influence the comparability of 1980, 1986, 1990, 1992, and 1994 data with those of earlier years.

[3] Includes Department of Veterans Affairs (formerly Veterans Administration) (VA) neuropsychiatric hospitals, VA general hospital psychiatric services, and VA psychiatric outpatient clinics.

[4] Includes freestanding psychiatric outpatient clinics, partial care organizations, and multiservice mental health organizations. Multiservice mental health organizations were redefined in 1984.

[5] The number of residents increased because all residential treatment residents were combined with 24-hour care hospital residents; previously, residential supportive patients were excluded.

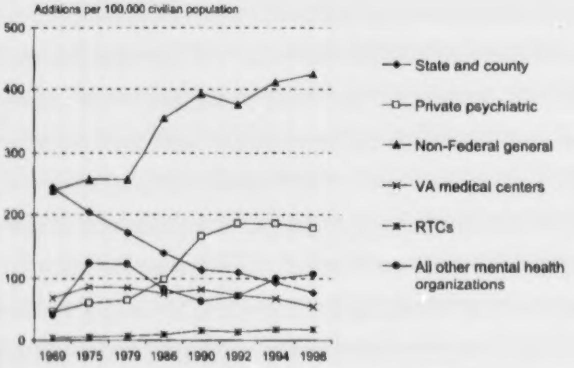


Figure 3. Rate of 24-hour hospital and residential treatment additions, by type of mental health organization: United States, selected years, 1969–98

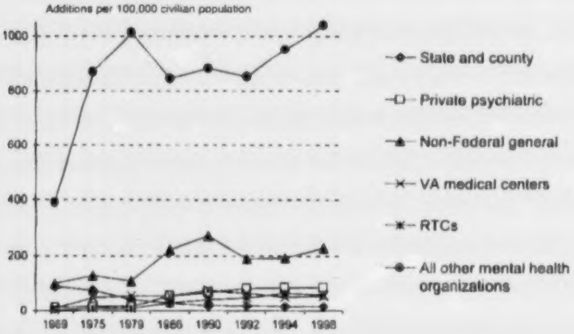


Figure 4. Rate of less than 24-hour care additions, by type of mental health organization: United States, selected years, 1969–98

less than 24-hour services has moderated, and, in fact, a slight decrease is noted between 1990 and 1992, generated mainly by a substantial decrease in outpatient additions to non-Federal general hospital psychiatric services. The number of additions to these facilities resumed its increase in 1994.

"All other organizations" now includes the free-standing outpatient and partial care clinics, as well as the multiservice organizations. In 1998, there were 2.8 million outpatient additions in this category. The less than 24-hour additions in the non-Federal general hospital psychiatric services ranked second, with more than 600,000 additions. Private psychiatric hospitals, RTCs, and the VA medical centers combined comprised over half a million additions. Additions in State mental hospitals numbered 42,000. All categories of organizations showed increases since 1994 in the number of additions except RTCs and State and county hospitals, but the latter declined by less than 100.

Patients in 24-Hour Hospital and Residential Services

The number of 24-hour hospital and residential patients generally decreased from 1969 to 1998, with increases since the previous survey in 1986 and 1994 (Table 5). The 1994 increase was due entirely to the inclusion of residential supportive patients that had been excluded in previous years. Thus, the 1994–98 decline continued a trend that had begun after 1986. In 1969, there had been 471,451 patients, but by 1992 the number had declined to 214,714. The number in 1998 was only 215,798. The rate per 100,000 civilian population decreased from 237 in 1969 to 80 in 1998. Much of the decrease occurred before 1979 when substantial reductions occurred in the number of resident patients in State mental hospitals and in VA medical center psychiatric inpatient services. The total resident patient count has continued to decline as decreases in the State mental hospital, VA medical center, and private psychiatric hospital resident patient populations (the last peaked in 1990 and have declined irregularly since) have not been offset by the increases seen by non-Federal general hospital psychiatric services, RTCs, and other organizations. In 1969, State mental hospitals accounted for the largest percentage of residents of psychiatric organizations, over three-fourths. Their percentage of residents declined steadily but they continued to treat more residential patients than any other type of treatment facility until 1998. In 1998, there were more residential patients in "all other organizations," with State and county hospitals and "all other organizations" each serving about a quarter of all patients.

Patient Care Episodes

Patient care episodes, unlike the other volume measures shown, provide an estimate of the number of persons under care throughout the year. They are defined as the number of persons receiving services at the beginning of the year in the 24-hour hospital and residential treatment and less than 24-hour care services of mental health organizations plus the number of additions to these services throughout the year. They are a duplicated count in that persons can be admitted to more than one type of service or can be admitted to the same service more than once during the year.

Patient care episodes have been tracked by the National Institute of Mental Health and CMHS since 1955. From then until 1998, the locus of mental health care in the United States shifted from inpatient to ambulatory services, as measured by the number of patient care episodes. Of the 1.7 million episodes in 1955, 77 percent were in 24-hour hospital services and 23 percent in less than 24-hour services; by 1971, there were 4.2 million episodes, of which 42 percent were in 24-hour hospital service and 58 percent in less than 24-hour hospital services; by 1998, of the nearly 11 million episodes, 24 percent were in 24-hour hospital services and 76 percent were in less than 24-hour hospital services, almost exactly the reverse of the 1955 distribution (Table 6 and Figure 5).

Along with the shift of patient care episodes from 24-hour hospital and residential treatment care to less than 24-hour services, a shift also occurred across organization types within these two services (Redick et al. 1994b). State mental hospitals accounted for 63 percent of 24-hour hospital and residential treatment episodes in 1955, compared to only 10 percent in 1998. By contrast, in 1998, psychiatric services for 24-hour hospital and residential treatment patients of non-Federal general hospitals and private psychiatric hospitals accounted for 47 and 20 percent, respectively. Compared to 1998, in 1955 a larger proportion of less than 24-hour care episodes was provided by State mental hospitals (9 percent in 1955, 1 percent in 1998) and VA medical centers (11 percent in 1955, 5 percent in 1998), while those of all other organization types combined were higher in 1955 than in 1998 (80 percent in 1955, 77 percent in 1998). See Figures 6 and 7.

Staffing of Mental Health Organizations

The complete enumeration component of the survey that collected data on mental health organizations in 1998 was more limited in its subject coverage than previous inventories. The questionnaire did not ask about staffing or finances, which were covered in a subsequent sample survey. Therefore, the following section is based on data only through 1994 and has not been changed since the publication of *Mental Health, United States, 1998*. Detailed staffing data for 1998 will be provided in a subsequent report.

Concomitant with increases in the number of mental health organizations and patients served by these organizations, the number of FTE staff employed by these organizations increased steadily between 1972 and 1994, from 375,984 to 577,669 (Table 7). Almost all of this increase was attributed to patient care staff, which increased from 241,265 to 370,635, and to professional staff, which increased from 100,886 to 225,250 during this period.

In 1972, professional patient care staff comprised about 27 percent of all FTE staff compared to 39 percent of all FTE staff in 1994 (Figure 8). Among the professional patient care staff disciplines, the largest gains over the 20-year period were noted for psychiatrists, psychologists, social workers, registered nurses, and other mental health professionals. In 1994, each of these professions declined except for registered nurses (Table 7).

By contrast, the number of other mental health workers (less than B.A.) employed in mental health organizations showed a variable pattern of increases and decreases between 1972 and 1994, with a larger number reported in 1994 (145,385) than in 1972 (140,379). The number of FTE administrative, clerical, and maintenance staff showed a larger gain over the 1972–94 period, increasing from 134,719 to 207,034 (Table 7).

As a percentage of all FTE staff, other mental health workers dropped from slightly over 37 percent in 1972 to 25 percent in 1994. The administrative and support staff declined from 36 percent in 1972 to 26 percent in 1990 and then rose to 36 percent again in 1994 (Table 7).

The mental health organization types that showed the largest proportional increases in number between 1972 and 1994, namely, private psychiatric hospitals, non-Federal general hospitals with separate psychiatric services, RTCs, and "all other mental health organizations," accounted for all of the increases in total FTE staff among mental health organizations during this period (Tables 7a–f).

Financing of Services

As with staffing, the complete enumeration component of the 1998 Survey collected no data on the financing of mental health services. Accordingly, this section is unchanged since the 1998 edition of *Mental Health, United States,* and the tables and text cover financing only up to 1994. Detailed data on resources and expenditures for 1998 will be covered in a subsequent report.

Table 6. Number and percent distribution of hospital and residential treatment care and less than 24-hour care episodes in mental health organizations: United States (excluding territories), selected years, 1955–97

Year	Total episodes	24-hour hospital and residential treatment care episodes[1]	Less than 24-hour care episodes
		Number	
1997	10,714,398	2,548,030	8,166,368
1994	9,584,216	2,502,166	7,082,050
1992	8,824,701	2,322,374	6,502,307
1990	8,620,628	2,266,022	6,354,606
1986	7,885,618	2,055,571	5,830,047
1983	7,194,038	1,860,613	5,333,425
1975	6,857,597	1,817,108	5,040,489
1971	4,190,913	1,755,816	2,435,097
1969	3,682,454	1,710,372	1,972,082
1965	2,636,525	1,565,525	1,071,000
1955	1,675,352	1,296,352	379,000
		Percent distribution	
1997	100.0	23.8	76.2
1994	100.0	26.1	73.9
1992	100.0	26.3	73.7
1990	100.0	26.3	73.7
1986	100.0	26.1	73.9
1983	100.0	25.9	74.1
1975	100.0	26.5	73.5
1971	100.0	41.9	58.1
1969	100.0	46.4	53.6
1965	100.0	59.4	40.6
1955	100.0	77.4	22.6

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services.

[1] The data for 1994 include residential supportive additions that were excluded in previous years. This is not new material except for the category "all other organizations."

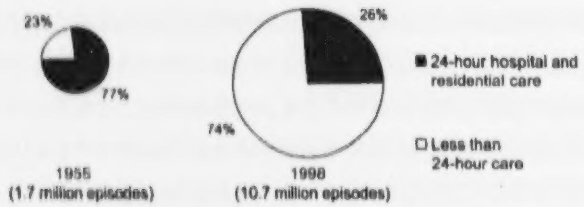


Figure 5. Patient care episodes in mental health organizations in 1955 and 1998

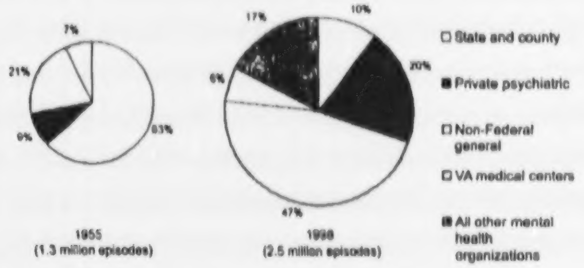


Figure 6. 24-hour hospital and residential treatment care episodes in mental health organizations in 1955 and 1998

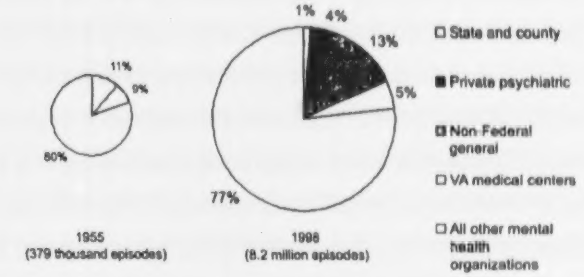


Figure 7. Less than 24-hour patient care episodes by type of organization in 1955 and 1998

Expenditures

Total expenditures by mental health organizations in the United States, as measured in current dollars, increased tenfold between 1969 and 1994, from $3.3 billion to $33.1 billion. However, when adjustments were made for inflation, that is, expenditures were expressed in constant dollars (1969 = 100), the total expenditures rose from $3.3 billion in 1969 to slightly more than $5 billion in 1994, which was about the same number and percentage as in 1992 (Figure 9, Tables 8a, b). Thus, only $1.7 billion or 5 percent of the $33.1 billion increase in current dollar expenditures between 1969 and 1994 represented an increase in purchasing power, while 95 percent of the increase was due to inflation.

All of the specific organization types registered increases in current dollar expenditures between 1969 and 1992, but State mental hospitals and VA medical centers showed declines from 1992 to 1994 (Figure 10). When measured in constant dollars, only State mental hospitals and VA medical centers showed no gains (Figure 11). As a result, the proportionate share of total expenditures changed significantly between 1969 and 1994 for some of the organization types. For example, State mental hospitals and VA medical centers comprised only 24 and 4 percent of total expenditures, respectively, in 1994 compared to 55 and 14 percent, respectively, in 1969; while private psychiatric hospitals, separate psychiatric services of non-Federal general hospitals and "all other organizations" (combined with CMHCs, multiservice, and ambulatory services) comprised 20, 16, and 29 percent, respectively, in 1994 (Figure 12), compared to 7, 9, and 7 percent, respectively, in 1969.

Trends in per capita expenditures, that is, the amount of expenditures per person in the civilian population of the United States, followed patterns similar to those noted above for the absolute expenditures among the various types of mental health organizations between 1969 and 1994. All of the organization types showed increases of varying degrees in current dollar per capita expenditures during this period except for the State mental hospitals and the VA medical center psychiatric services. The rest of the increases were a result of the inflationary trend. However, when expressed in constant dollars, per capita expenditures decreased for all of the organizations except for the private psychiatric hospitals and the "all other mental health organizations." These two categories, however, increased at a considerably smaller rate than current dollar per capita expenditures.

Revenues by Source

In 1994, revenues of mental health organizations in the United States totaled $36 billion, an increase of $5.3 billion over 1992. Of the 1994 total revenues, 30 percent came from State mental health agencies and other State government funds, 18 percent from client fees, 39 percent from Federal Government sources (including Medicare and Medicaid), 8 percent from local governments, 1.4 percent from contracts, and 4 percent from all other sources

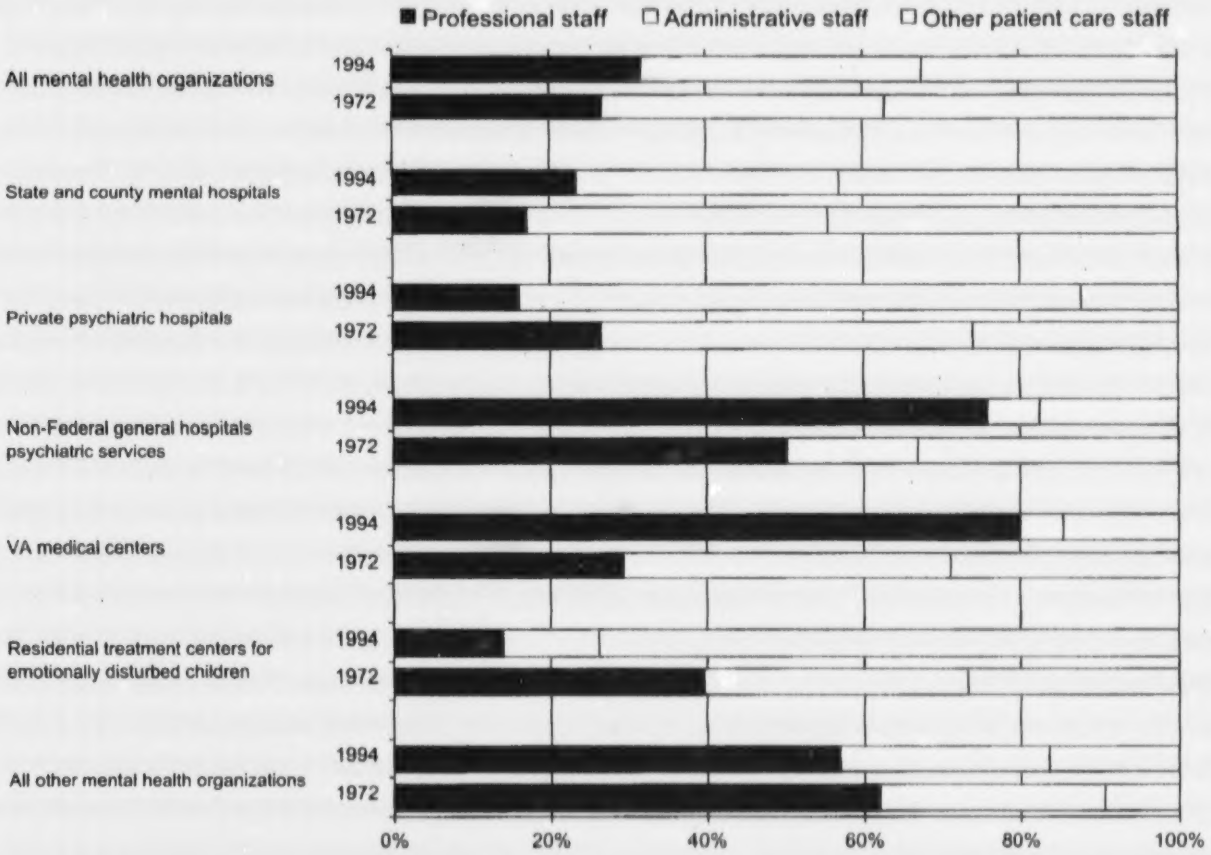


Figure 8. Percent distribution of full-time professional, administrative, and other patient care staff in mental health organizations in the United States, 1972 and 1994

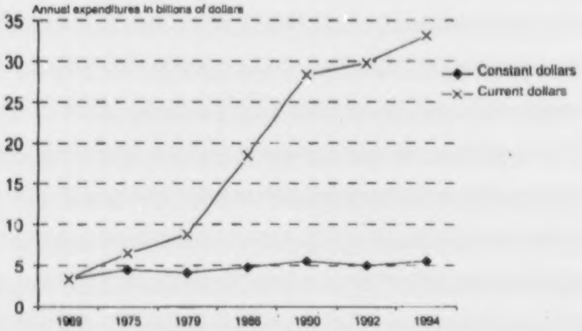


Figure 9. Annual expenditures in current and constant dollars, all mental health organizations: United States, selected years, 1969–94

(Figure 13). The distribution of revenues by source for 1994 was similar to 1992 in that the higher percentage of funds came from Federal and State government funding. Funding from other sources was proportionately the same as in 1992.

Among the different organization types, the major revenue sources showed variation in 1994. As would be expected, State mental hospitals obtained most of their funding (71 percent) from State mental health agencies and other State government sources, and virtually all funding for VA medical centers came from the Federal Government. Slightly over 44 percent of all funding for private psychiatric hospitals was obtained from client fees, with another 40 percent being shared by Medicare and Medicaid. State and local governments and Medicaid were the major contributors of funds for RTCs and "all other mental health organizations," which include multiservice and ambulatory services (Table 9).

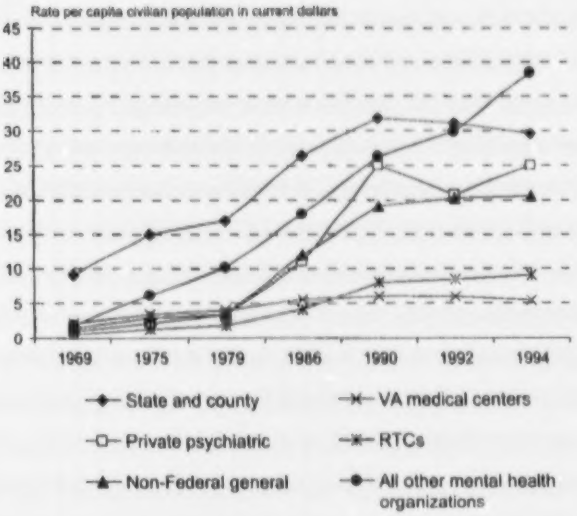


Figure 10. Rate of current dollar expenditures per capita, by type of mental health organization: United States, selected years, 1969–94

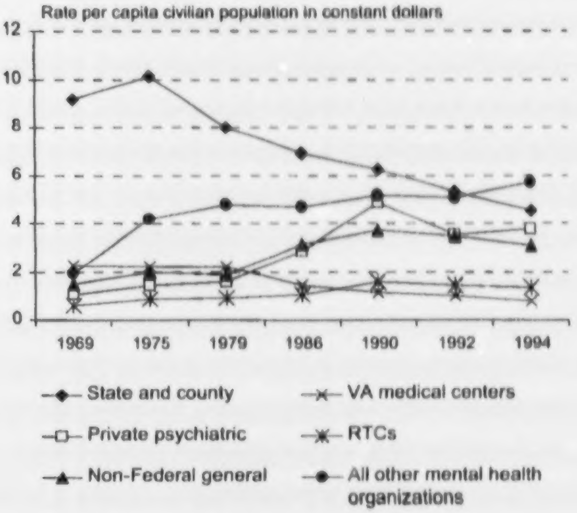


Figure 11. Rate of constant (1969 = 100) dollar expenditures per capita, by type of mental health organization: United States, selected years, 1969–94

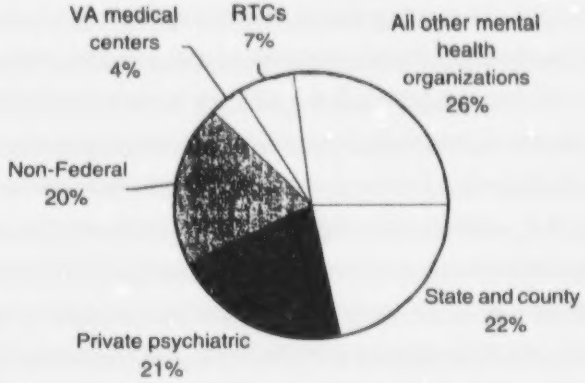


Figure 12. Distribution of source revenues by mental health organizations, 1994

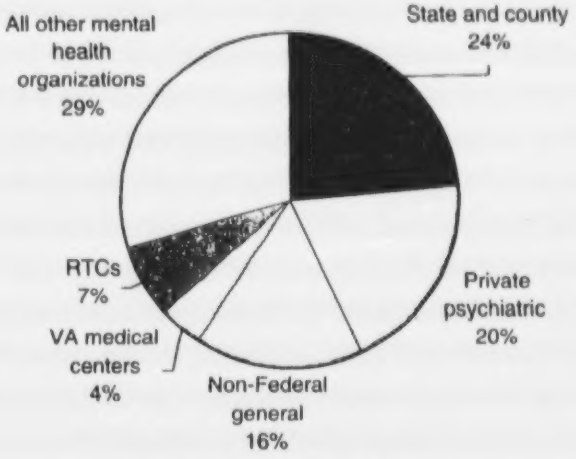


Figure 13. Percent distribution of expenditures, by type of organization, 1994

Policy Implications

This chapter provides data that allow for the analysis and planning of mental health service delivery.[4] By providing time-series data, it is possible to map the trends and evolution of mental health treatment. In addition, recent data, particularly

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[4] In 1993, CMHS changed the name of its Mental Health Statistical Note series to Data Highlights. In addition, instead of presenting detailed and relatively long descriptive reports, the new reports were reduced in size, and generally present not only descriptive data as in the past, but also give interpretations of the trends and policy implications. Some excerpts from those publications are incorporated into the discussion above. The policy implications cover topics from each of the broad system foci of this chapter, namely, availability, volume of service, staffing, and financing. They can help policymakers and legislators make decisions regarding the types and volume of mental health services to be included as benefits in health care reform legislation at all levels of Government, and can provide baseline data for years prior to the implementation of managed care.

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Table 7. Number and percent distribution of full-time equivalent staff[1] in all mental health organizations by staff discipline: United States, selected years, 1972–94[2]

Staff discipline	1972	1976	1978	1986[2,3]	1990	1992	1994
				Number of FTE staff			
All staff	375,984	373,969	430,051	494,515	563,619	585,972	577,669
Patient care staff	241,265	251,756	292,699	346,630	415,719	432,866	370,635
Professional patient care staff	100,886	117,190	153,598	232,481	273,374	305,988	225,250
Psychiatrists	12,938	12,896	14,492	17,874	18,818	22,803	20,242
Other physicians	3,991	3,055	3,034	3,868	3,865	3,949	2,692
Psychologists[4]	9,443	10,587	16,501	20,210	22,825	25,000	14,050
Social workers	17,687	18,927	28,125	40,951	53,375	57,136	41,326
Registered nurses	31,110	33,981	42,399	66,180	77,635	78,588	82,620
Other mental health professionals	17,514	27,977	39,363	56,245	84,071	102,162	57.982
Physical health professionals and assistants	8,203	9,767	9,684	27,153	12,785	16,350	6,338
Other mental health workers	140,379	134,566	139,101	114,149	142,345	126,878	145,385
Administrative, clerical, and maintenance staff	134,719	122,213	137,352	147,885	147,900	153,106	207,034
				Percent distribution of FTE staff			
All staff	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Patient care staff	64.2	67.3	68.1	70.1	73.8	73.9	64.2
Professional patient care staff	26.8	31.3	35.7	47.0	48.5	52.2	39.0
Psychiatrists	3.4	3.4	3.4	3.6	3.3	3.9	3.5
Other physicians	1.1	0.8	0.7	0.8	0.7	0.7	0.5
Psychologists[4]	2.5	2.8	3.8	4.1	4.0	4.3	2.4
Social workers	4.7	5.1	6.5	8.3	9.5	9.8	7.2
Registered nurses	8.3	9.1	9.9	13.4	13.8	13.4	14.3
Other mental health professionals	4.7	7.5	9.2	11.4	14.9	17.4	10.0
Physical health professionals and assistants	2.2	2.6	2.3	5.5	2.3	2.8	1.1
Other mental health workers	37.3	36.0	32.3	23.1	25.3	21.7	25.2
Administrative, clerical, and maintenance staff	35.8	32.7	31.9	29.9	26.2	26.1	35.8

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services.

[1] The computation of full-time equivalent staff is based on a 40-hour work week.

[2] For 1986 some organizations had been reclassified as a result of changes in reporting procedures and definitions.

[3] Includes data for CMHCs in 1978. In 1986, 1990, 1992, and 1994, these staff are subsumed under other organization types. Data for CMHCs are not shown separately.

[4] For 1972–78, this category included all psychologists with a B.A. degree and above; for 1986–94, it included only psychologists with an M.A. degree and above.

Table 7a. Number and percent distribution of full-time equivalent staff[1] in State and county mental hospitals, by staff discipline: United States, selected years, 1972–94

Staff discipline	**1972**	**1976**	**1978**	**1986**	**1990**	**1992**	**1994**
	Number of FTE staff						
All staff	223,886	219,006	205,289	182,466	175,566	171,745	148,415
Patient care staff	138,307	141,127	131,187	119,073	114,198	110,874	99,145
Professional patient care staff	38,516	46,596	45,131	54,853	50,035	56,953	38,480
Psychiatrists	4,389	4,333	3,712	3,762	3,849	4,457	3,442
Other physicians	2,440	2,047	1,809	1,917	1,962	2,126	1,467
Psychologists[2]	2,484	3,039	3,149	3,412	3,324	3,620	2,699
Social workers	5,324	5,948	5,924	6,238	7,013	7,378	5,276
Registered nurses	13,353	15,098	14,859	19,425	20,848	21,119	16,918
Other mental health professionals	5,890	10,551	10,492	8,033	8,955	11,527	5,450
Physical health professionals and assistants	4,636	5,580	5,186	12,066	4,084	6,726	3,228
Other mental health workers	99,791	94,531	86,056	64,220	64,163	53,921	60,664
Administrative, clerical, and maintenance staff	85,579	77,879	74,102	63,393	61,368	60,871	49,270
	Percent distribution of FTE staff						
All staff	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Patient care staff	61.8	64.4	63.9	65.3	65.0	64.6	66.8
Professional patient care staff	17.2	21.3	22.0	30.1	28.5	33.2	25.9
Psychiatrists	2.0	2.0	1.8	2.1	2.2	2.6	2.3
Other physicians	1.1	0.9	0.9	1.1	1.1	1.2	1.0
Psychologists[2]	1.1	1.4	1.5	1.9	1.9	2.1	1.8
Social workers	2.4	2.7	2.9	3.4	4.0	4.3	3.6
Registered nurses	6.0	6.9	7.2	10.6	11.9	12.3	11.4
Other mental health professionals	2.6	4.8	5.1	4.4	5.1	6.7	3.7
Physical health professionals and assistants	2.1	2.5	2.5	6.6	2.3	3.9	2.2
Other mental health workers	44.6	43.2	41.9	35.2	36.5	31.4	40.9
Administrative, clerical, and maintenance staff	38.2	35.6	36.1	34.7	35.0	35.4	33.2

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services.

[1] The computation of full-time equivalent staff is based on a 40-hour work week.

[2] For 1972–78, this category included all psychologists with a B.A. degree and above; for 1986–94, it included only psychologists with an M.A. degree and above.

Table 7b. Number and percent distribution of full-time equivalent staff[1] in private psychiatric hospitals, by staff discipline: United States, selected years, 1972–94

Staff discipline	1972	1976	1978	1986	1990	1992	1994
				Number of FTE staff			
All staff	21,504	27,655	29,972	58,912	75,392	77,251	71,906
Patient care staff	11,329	17,196	18,728	35,480	57,200	56,877	20,388
Professional patient care staff	5,735	9,879	11,419	27,246	45,669	44,206	14,132
Psychiatrists	1,067	1,369	1,285	1,554	1,582	2,081	1,367
Other physicians	101	162	185	141	316	147	160
Psychologists[2]	305	559	590	1,557	1,977	1,656	708
Social workers	418	784	920	2,893	4,044	4,587	1,963
Registered nurses	2,634	3,395	3,967	10,147	14,819	15,086	5,161
Other mental health professionals	857	2,794	3,644	7,478	17,358	15,303	3,563
Physical health professionals and assistants	353	816	828	3,476	5,573	5,346	1,210
Other mental health workers	5,594	7,317	7,309	8,234	11,531	12,671	6,256
Administrative, clerical, and maintenance staff	10,175	10,459	11,244	23,432	18,192	20,374	51,518
				Percent distribution of FTE staff			
All staff	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Patient care staff	52.7	62.2	62.5	60.2	75.9	73.6	28.4
Professional patient care staff	26.7	35.7	38.1	46.2	60.6	57.2	19.7
Psychiatrists	5.0	5.0	4.3	2.6	2.1	2.7	1.9
Other physicians	0.5	0.6	0.6	0.2	0.4	0.2	0.2
Psychologists[2]	1.4	2.0	2.0	2.6	2.6	2.1	1.0
Social workers	1.9	2.8	3.1	4.9	5.4	5.9	2.7
Registered nurses	12.2	12.3	13.2	17.2	19.7	19.5	7.2
Other mental health professionals	4.0	10.1	12.2	12.7	23.0	19.8	5.0
Physical health professionals and assistants	1.6	3.0	2.8	5.9	7.4	6.9	1.7
Other mental health workers	26.0	26.5	24.4	14.0	15.3	16.4	8.7
Administrative, clerical, and maintenance staff	47.3	37.8	37.5	39.8	24.1	26.4	71.6

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services.

[1] The computation of full-time equivalent staff is based on a 40-hour work week.

[2] For 1972–78, this category included all psychologists with a B.A. degree and above; for 1986–94, it included only psychologists with an M.A. degree and above.

Table 7c. Number and percent distribution of full-time equivalent staff[1] in the separate psychiatric services of non-Federal general hospitals, by staff discipline: United States, selected years, 1972–94

Staff discipline	1972	1976	1978	1986	1990	1992	1994
				Number of FTE staff			
All staff	30,982	39,621	40,908	70,187	80,625	81,819	80,532
Patient care staff	25,385	33,969	34,966	61,148	72,214	72,880	75,231
Professional patient care staff	15,565	21,231	22,401	50,233	57,019	58,544	64,264
Psychiatrists	3,394	3,933	3,583	6,009	6,500	6,160	4,920
Other physicians	452	180	237	671	585	353	369
Psychologists[2]	1,100	1,356	1,512	2,983	3,951	4,182	2,245
Social workers	1,904	2,515	2,552	5,634	7,241	7,985	5,198
Registered nurses	6,922	9,445	10,611	23,454	28,473	28,355	45,968
Other mental health professionals	1,519	3,394	3,583	7,658	9,643	10,812	5,089
Physical health professionals and assistants	274	408	323	3,824	626	697	475
Other mental health workers	10,270	12,738	12,565	10,915	15,195	14,336	10,968
Administrative, clerical, and maintenance staff	5,147	5,652	5,942	9,039	8,411	8,939	5,301
				Percent distribution of FTE staff			
All staff	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Patient care staff	81.9	85.7	85.5	87.1	89.6	89.1	93.4
Professional patient care staff	50.2	53.6	54.8	71.6	70.7	71.6	79.8
Psychiatrists	11.0	9.9	8.8	8.6	8.1	7.5	6.1
Other physicians	1.5	0.5	0.6	1.0	0.7	0.4	0.5
Psychologists[2]	3.6	3.4	3.7	4.3	4.9	5.1	2.8
Social workers	6.1	6.3	6.2	8.0	9.0	9.8	6.5
Registered nurses	22.3	23.8	25.9	33.4	35.3	34.7	57.1
Other mental health professionals	4.9	8.6	8.8	10.9	12.0	13.2	6.3
Physical health professionals and assistants	0.9	1.0	0.8	5.4	0.8	0.9	0.6
Other mental health workers	33.1	32.1	30.7	15.6	18.8	17.5	13.6
Administrative, clerical, and maintenance staff	16.6	14.3	14.5	12.9	10.4	10.9	6.6

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services.

[1] The computation of full-time equivalent staff is based on a 40-hour work week.

[2] For 1972–78, this category included all psychologists with a B.A. degree and above; for 1986–94, it included only psychologists with an M.A. degree and above.

Table 7d. Number and percent distribution of full-time equivalent staff[1] in VA medical centers, by staff discipline: United States, selected years, 1972–94

Staff discipline	1972	1976	1978	1986	1990	1992	1994
				Number of FTE staff			
All staff	42,152	39,963	40,785	33,376	29,741	24,345	22,788
Patient care staff	24,523	25,226	26,282	23,559	22,080	20,834	21,569
Professional patient care staff	12,315	13,129	13,954	17,782	14,619	16,274	17,871
Psychiatrists	902	1,320	1,471	2,245	2,103	3,403	6,676
Other physicians	626	504	531	555	464	486	212
Psychologists[2]	895	1,134	1,255	1,439	1,476	2,479	623
Social workers	1,098	1,412	1,620	1,680	1,855	2,244	1,759
Registered nurses	4,713	4,503	5,326	6,761	5,888	5,485	8,125
Other mental health professionals	1,497	1,812	1,748	1,423	1,322	1,266	186
Physical health professionals and assistants	2,584	2,444	2,003	3,679	1,511	911	290
Other mental health workers	12,208	12,097	12,328	5,777	7,461	4,560	3,697
Administrative, clerical, and maintenance staff	17,629	14,737	14,503	9,817	7,661	3,511	1,219
				Percent distribution of FTE staff			
All staff	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Patient care staff	58.2	63.1	64.4	70.6	74.2	85.6	94.7
Professional patient care staff	29.2	32.9	34.2	53.3	49.2	66.8	78.4
Psychiatrists	2.1	3.3	3.6	6.7	7.1	14.0	29.3
Other physicians	1.5	1.3	1.3	1.7	1.6	2.0	0.9
Psychologists[2]	2.1	2.8	3.1	4.3	5.0	10.2	2.7
Social workers	2.6	3.5	4.0	5.0	6.2	9.2	7.7
Registered nurses	11.2	11.3	13.1	20.3	19.8	22.5	35.7
Other mental health professionals	3.6	4.5	4.3	4.3	4.4	5.2	0.8
Physical health professionals and assistants	6.1	6.1	4.9	11.0	5.1	3.7	1.3
Other mental health workers	29.0	30.3	30.2	17.3	25.1	18.7	16.2
Administrative, clerical, and maintenance staff	41.8	36.9	35.6	29.4	25.8	14.4	5.3

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services.

[1] The computation of full-time equivalent staff is based on a 40-hour work week.

[2] For 1972–78, this category included all psychologists with a B.A. degree and above; for 1986–94, it included only psychologists with an M.A. degree and above.

Table 7e. Number and percent distribution of full-time equivalent staff[1] in residential treatment centers for emotionally disturbed, by staff discipline: United States, selected years, 1972–94

Staff discipline	1972	1976	1978	1986	1990	1992	1994
				Number of FTE staff			
All staff	17,025	19,352	22,443	34,569	53,220	55,678	59,011
Patient care staff	11,299	13,824	16,464	25,146	40,969	42,801	51,725
Professional patient care staff	6,738	8,990	10,824	17,599	26,032	30,207	29,765
Psychiatrists	147	149	140	335	498	748	283
Other physicians	34	27	22	86	101	126	52
Psychologists[2]	354	434	497	911	1,492	1,641	961
Social workers	1,653	1,778	2,196	4,585	5,636	6,506	3,843
Registered nurses	244	301	324	746	1,238	1,367	858
Other mental health professionals	4,177	6,072	7,359	9,435	16,765	18,970	23,608
Physical health professionals and assistants	129	229	286	1,501	302	849	160
Other mental health workers	4,561	4,834	5,640	7,547	14,937	12,594	21,960
Administrative, clerical, and maintenance staff	5,726	5,528	5,979	9,423	12,251	12,877	7,286
				Percent distribution of FTE staff			
All staff	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Patient care staff	66.4	71.4	73.4	72.7	77.0	76.9	87.7
Professional patient care staff	39.6	46.5	48.2	50.9	48.9	54.3	50.4
Psychiatrists	0.9	0.8	0.6	1.0	0.9	1.3	0.5
Other physicians	0.2	0.1	0.1	0.2	0.2	0.2	0.1
Psychologists[2]	2.1	2.2	2.2	2.6	2.8	2.9	1.6
Social workers	9.7	9.2	9.8	13.3	10.6	11.7	6.5
Registered nurses	1.4	1.6	1.4	2.2	2.3	2.5	1.5
Other mental health professionals	24.5	31.4	32.8	27.3	31.5	34.1	40.0
Physical health professionals and assistants	0.8	1.2	1.3	4.3	0.6	1.5	0.3
Other mental health workers	26.8	25.0	25.1	21.8	28.1	22.6	37.2
Administrative, clerical, and maintenance staff	33.6	28.6	26.6	27.3	23.0	23.1	12.3

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services.

[1] The computation of full-time equivalent staff is based on a 40-hour work week.

[2] For 1972–78, this category included all psychologists with a B.A. degree and above; for 1986–94, it included only psychologists with an M.A. degree and above.

Table 7f. Number and percent distribution of full-time equivalent staff[1] in "all other mental health organizations,"[2] by staff discipline: United States, selected years, 1972–94

Staff discipline	**1972**	**1976**	**1978**	**1986**	**1990**	**1992**	**1994**
				Number of FTE staff			
All staff	20,774	28,372	33,430	33,430	115,005	149,075	195,018
Patient care staff	14,831	20,414	23,861	23,861	82,224	109,058	102,578
Professional patient care staff	12,879	17,365	20,263	20,263	64,768	80,000	60,738
Psychiatrists	1,815	1,792	1,781	1,781	3,969	4,286	3,554
Other physicians	127	135	83	83	498	437	432
Psychologists[3]	2,811	4,065	4,565	4,565	9,908	10,605	6,814
Social workers	4,979	6,490	7,593	7,593	19,921	27,586	23,287
Registered nurses	958	1,239	1,355	1,355	5,647	6,369	5,590
Other mental health professionals	1,978	3,354	4,521	4,521	22,218	30,028	20,086
Physical health professionals and assistants	211	290	365	365	2,607	689	975
Other mental health workers	1,952	3,049	3,598	3,598	17,456	29,058	41,840
Administrative, clerical, and maintenance staff	5,942	7,958	9,569	9,569	32,781	40,017	92,440
				Percent distribution of FTE staff			
All staff	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Patient care staff	71.4	72.0	71.4	71.4	71.5	73.2	52.6
Professional patient care staff	62.0	61.2	60.6	60.6	56.3	53.7	31.1
Psychiatrists	8.7	6.3	5.3	5.3	3.5	2.9	1.8
Other physicians	0.6	0.5	0.2	0.2	0.4	0.3	0.2
Psychologists[3]	13.5	14.3	13.7	13.7	8.6	7.1	3.5
Social workers	24.0	22.9	22.7	22.7	17.3	18.5	11.9
Registered nurses	4.6	4.4	4.1	4.1	4.9	4.3	2.9
Other mental health professionals	9.5	11.8	13.5	13.5	19.3	20.1	10.3
Physical health professionals and assistants	1.0	1.0	1.1	1.1	2.3	0.5	0.5
Other mental health workers	9.4	10.7	10.8	10.8	15.2	19.5	21.5
Administrative, clerical, and maintenance staff	28.6	28.0	28.6	28.6	28.5	26.8	47.4

[1] The computation of full-time equivalent staff is based on a 40-hour work week.

[2] Includes freestanding outpatient psychiatric clinics, partial care, and multiservice mental health organizations.

[3] For 1972–78, this category included all psychologists with a B.A. degree and above; for 1986–94, it included only psychologists with an M.A. degree and above.

Table 8a. Amount, percent distribution, and rate per capita[1] of expenditures in current dollars, by type of mental health organization: United States, selected years, 1969–94[2]

Type of organization	1969	1975	1979	1986	1990	1992	1994
Expenditures in thousands of dollars							
All organizations	3,292,563	6,564,312	8,763,795	18,457,741	28,410,261	29,765,202	33,136,440
State and county mental hospitals	1,814,101	3,185,049	3,756,754	6,325,844	7,774,482	7,970,163	7,824,661
Private psychiatric hospitals	220,026	466,720	743,037	2,629,009	6,101,063	5,301,940	6,468,184
Non-Federal general hospitals with psychiatric services	298,000	621,284	722,868	2,877,739	4,661,574	5,192,984	5,344,188
VA medical centers[3]	450,000	699,027	848,469	1,337,943	1,480,082	1,529,745	1,386,213
Federally funded community mental health centers	143,491	775,580	1,480,890	—	—	—	—
Residential treatment centers for emotionally disturbed children	122,711	278,950	436,246	977,616	1,969,283	2,167,324	2,360,363
All other mental health organizations[4]	244,234	537,702	775,531	4,309,590	6,423,777	7,603,066	9,752,831
Percent distribution of expenditures							
All organizations	100.0	100.0	100.0	100.0	100.0	100.0	100.0
State and county mental hospitals	55.1	48.5	42.9	34.3	27.4	26.8	23.6
Private psychiatric hospitals	6.7	7.1	8.5	14.2	21.5	17.8	19.5
Non-Federal general hospitals with psychiatric services	9.1	9.5	8.2	15.6	16.4	17.4	16.1
VA medical centers[3]	13.7	10.6	9.7	7.2	5.2	5.1	4.2
Federally funded community mental health centers	4.4	11.8	16.9	—	—	—	—
Residential treatment centers for emotionally disturbed children	3.7	4.2	5.0	5.3	6.9	7.3	7.1
All other mental health organizations[4]	7.4	8.2	8.8	23.3	22.6	25.5	29.4
Expenditures per capita civilian population							
All organizations	16.53	31.05	39.61	77.10	116.39	116.69	127.86
State and county mental hospitals	9.11	15.06	16.86	26.43	31.85	31.25	30.19
Private psychiatric hospitals	1.10	2.21	3.34	10.98	24.99	20.78	24.96
Non-Federal general hospitals with psychiatric services	1.50	2.94	3.37	12.02	19.10	20.36	20.62
VA medical centers[3]	2.26	3.31	3.95	5.59	6.06	6.00	5.35
Federally funded community mental health centers	0.72	3.67	6.65	—	—	—	—
Residential treatment centers for emotionally disturbed children	0.62	1.32	1.96	4.08	8.07	8.50	9.11
All other mental health organizations[4]	1.22	2.54	3.48	18.00	26.32	29.80	37.63

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services.

[1] The population used in the calculation of these rates is the July 1 civilian popluation of the United States for each year.

[2] Some organizations were reclassified as a result of changes in reporting procedures and definitions. For 1979–80, comparable data were not available for certain organization types and data for either an earlier or a later period were substituted. These factors influence the comparability of 1980, 1986, 1990, 1992, and 1994 data with those of earlier years.

[3] Includes Department of Veterans Affairs (formerly Veterans Administration) (VA) neuropsychiatric hospitals, VA general hospital psychiatric services, and VA psychiatric outpatient clinics.

[4] Includes freestanding psychiatric outpatient clinics, partial care organizations, and multiservice mental health organizations. Multiservice mental health organizations were redefined in 1984.

Table 8b. Amount, percent distribution, and rate per capita[1] of expenditures in constant dollars (1969 = 100)[2], by type of mental health organization: United States, selected years, 1969–94[3]

Type of organization	1969	1975	1979	1986	1990	1992	1994
Expenditures in thousands of dollars							
All organizations	3,292,563	4,414,465	4,145,598	4,828,079	5,566,274	4,995,003	5,010,045
State and county mental hospitals	1,814,101	2,141,929	1,777,083	1,654,681	1,523,214	1,337,500	1,183,045
Private psychiatric hospitals	220,026	313,867	351,484	687,682	1,195,349	889,737	977,953
Non-Federal general hospitals with psychiatric services	298,000	417,810	341,943	752,744	913,318	871,452	808,011
VA medical centers[4]	450,000	470,092	401,357	349,972	289,985	256,712	209,588
Federally funded community mental health centers	143,491	521,574	700,516				
Residential treatment centers for emotionally disturbed children	122,711	187,592	206,360	255,720	385,831	353,706	356,874
All other mental health organizations[5]	244,234	361,601	366,855	1,127,280	1,258,577	1,275,896	1,474,574
Percent distribution of expenditures							
All organizations	100.0	100.0	100.0	100.0	100.0	100.0	100.0
State and county mental hospitals	55.1	48.5	42.9	34.3	27.4	26.8	23.6
Private psychiatric hospitals	6.7	7.1	8.5	14.2	21.5	17.8	19.5
Non-Federal general hospitals with psychiatric services	9.1	9.5	8.2	15.6	16.4	17.4	16.1
VA medical centers[4]	13.7	10.6	9.7	7.2	5.2	5.1	4.2
Federally funded community mental health centers	4.4	11.8	16.9				
Residential treatment centers for emotionally disturbed children	3.7	4.2	5.0	5.3	6.9	7.3	7.1
All other mental health organizations[5]	7.4	8.2	8.8	23.3	22.6	25.5	29.4
Expenditures per capita civilian population							
All organizations	$16.53	$20.88	$19.37	$20.15	$22.81	$19.83	$19.33
State and county mental hospitals	$9.11	$10.13	$7.98	$6.90	$6.24	$5.31	$4.56
Private psychiatric hospitals	$1.10	$1.48	$1.58	$2.87	$4.90	$3.53	$3.77
Non-Federal general hospitals with psychiatric services	$1.50	$1.98	$1.89	$3.14	$3.74	$3.46	$3.12
VA medical centers[4]	$2.26	$2.22	$2.21	$1.46	$1.19	$1.02	$0.81
Federally funded community mental health centers	$0.72	$2.47	$3.14				
Residential treatment centers for emotionally disturbed children	$0.62	$0.89	$0.92	$1.07	$1.58	$1.44	$1.38
All other mental health organizations[5]	$1.22	$1.71	$1.65	$4.71	$5.16	$5.07	$5.69

Sources: Published and unpublished inventory data from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services.

[1] The population used in the calculation of these rates is the July 1 civilian population of the United States for each year.

[2] Based on the medical care component of the consumer price index (1969 = 100). Indices for other years are 1975 (148.7), 1979 (211.4), 1986 (382.3), 1988 (434.5), 1992 (595.9), and 1994 (661.4).

[3] Some organizations were reclassified as a result of changes in reporting procedures and definitions. For 1979–80, comparable data were not available for certain organization types and data for either an earlier or a later period were substituted. These factors influence the comparability of 1980, 1986, 1990, 1992, and 1994 data with those of earlier years.

[4] Includes Department of Veterans Affairs (formerly Veterans Administration) (VA) neuropsychiatric hospitals, VA general hospital psychiatric services, and VA psychiatric outpatient clinics.

[5] Includes freestanding psychiatric outpatient clinics, partial care organizations, and multiservice mental health organizations. Multiservice mental health organizations were redefined in 1984.

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Table 9. Amount and percent distribution of revenue in thousands of dollars, by type of mental health organization: United States, 1990, 1992, 1994

Source of Revenue	Type of organization											
	All organizations			State and county mental hospitals			Private psychiatric hospitals			Non-Federal general hospitals		
	1990	1992	1994	1990	1992	1994	1990	1992	1994	1990	1992	1994
	Revenues in thousands of dollars											
Total Revenue	27,776,102	30,844,812	36,182,690	7,717,856	8,096,881	7,814,103	5,320,520	6,055,014	7,626,498	4,927,298	5,367,425	7,159,263
State mental health agency funds	8,630,498	9,411,914	8,878,168	5,419,765	5,865,998	5,081,037	209,112	82,431	127,677	177,982	225,679	175,454
Other State government	1,437,644	1,027,353	1,973,285	517,856	109,644	433,039	56,653	51,174	124,791	69,251	42,664	61,819
Client fees	6,120,934	6,133,417	6,390,082	302,949	294,737	192,112	3,261,421	3,237,863	3,363,513	1,798,097	1754848	1,958,094
Medicaid	3,645,107	5,628,876	7,140,560	815,292	1,356,140	1,423,626	500,722	949,466	1,002,516	1,195,036	1604334	1,980,399
Medicare	2,244,945	3,131,280	5,072,842	367,950	297,957	296,460	575,587	1,192,043	2,010,145	1,195,009	1503021	2,512,528
Other Federal	2,170,072	2,334,653	1,925,562	52,004	37,725	96,852	320,091	361,132	275,855	34,065	26,132	94,623
Local government	2,203,227	2,258,796	2,937,201	159,412	106,184	224,228	93,589	94,650	118,362	224,389	108,393	146,667
Contract funds	279,870	243,511	484,106	16,997	1,166	686	15,716	34,618	294,520	141,034	60,399	62,574
All other sources	1,043,805	675,012	1,380,884	65,631	27,330	66,063	287,629	51,637	309,119	92,436	41,955	167,105
	Percent distribution of revenues											
Total Revenue	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
State mental health agency funds	31.1	30.5	24.5	70.2	72.5	65.0	3.9	1.4	1.7	3.6	4.2	2.4
Other State government	5.2	3.3	5.5	6.7	1.4	5.5	1.1	0.8	1.6	1.4	0.8	0.9
Client fees	22.0	19.9	17.7	3.9	3.6	2.5	61.3	53.4	44.1	36.5	32.7	27.4
Medicaid	13.1	18.2	19.7	10.5	16.7	18.2	9.4	15.7	13.1	24.2	29.9	27.7
Medicare	8.1	10.2	14.0	4.8	3.7	3.8	10.8	19.7	26.4	24.2	28.0	35.1
Other Federal	7.8	7.6	5.3	0.7	0.5	1.3	6.0	6.0	3.6	0.7	0.5	1.3
Local government	7.9	7.3	8.1	2.1	1.3	2.9	1.8	1.6	1.6	4.6	2.0	2.0
Contract funds	1.0	0.8	1.4	0.2	0.0	0.0	0.3	0.6	3.9	2.9	1.1	0.9
All other sources	3.8	2.2	3.8	0.9	0.3	0.8	5.4	0.8	4.1	1.9	0.8	2.3

(continued)

Table 9. Amount and percent distribution of revenue in thousands of dollars, by type of mental health organization: United States, 1990, 1992, 1994 (continued)

Source of Revenue	Type of organization								
	VA medical centers			RTCs			All other mental health organizations		
	1990	1992	1994	1990	1992	1994	1990	1992	1994
	Revenues in thousands of dollars								
Total Revenue	1,458,573	1,537,624	1,431,333	1,960,029	2,152,681	2,390,039	7,635,185	6,391,725	9,762,456
State mental health agency funds			126,497	291,459	357,706	365,589	2,880,100	2,532,180	3,001,915
Other State government				397,764	432,613	546,214	391,258	396,120	807,421
Client fees	285		11,811	192,615	189,469	106,449	656,500	565,467	758,103
Medicaid				152,299	238,469	384,802	1,480,467	981,758	2,349,217
Medicare				9,796	11,423	7,444	126,834	96,603	246,267
Other Federal	1,458,273	1,537,455	1,293,025	49,907	34,031	57,815	338,178	255,732	107,392
Local government				632,372	636,180	668,343	1,313,389	1,093,465	1,780,601
Contract funds				9,598	25,482	21,379	121,846	96,525	104,948
All other sources	15	169	0	224,219	227,308	232,004	326,613	373,875	606,592
	Percent distribution of revenues								
Total Revenue	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
State mental health agency funds			8.8	14.9	16.6	15.3	37.7	39.6	30.7
Other State government				20.3	20.0	22.8	5.1	6.2	8.3
Client fees	0.0	0.0	0.8	9.8	8.8	4.5	8.6	8.8	7.8
Medicaid				7.8	11.1	16.1	19.4	15.4	24.1
Medicare				0.5	0.5	0.3	1.7	1.5	2.5
Other Federal	100.0	100.0	90.4	2.5	1.6	2.4	4.4	4.0	1.1
Local government				32.3	29.6	28.0	17.2	17.0	18.2
Contract funds				0.5	1.2	0.9	1.6	1.5	1.1
All other sources	0.0	0.0	0.0	11.4	10.6	9.7	4.3	5.8	6.2

those collected in 1992 and 1994, provide insight into the large-scale transformations in health care service in the 1990's. Analysts of health policy are faced with new challenges following the reform of Federal health care and social service programs, and mental health policy is no exception to change and reform in social services.

Number of Beds

The substantial increase in the number of private psychiatric hospitals and non-Federal general hospital psychiatric inpatient and residential services during the 1980's has generated mergers, consolidations, downsizings, and closings of some of these hospitals. During the 1990's the number of general hospitals with inpatient psychiatric services has fluctuated slightly but not markedly increased, and the number of inpatient beds has been even more stable. The number of private psychiatric hospitals declined somewhat from 1992 to 1994 and more sharply between 1994 and 1998, and the number of beds followed the same pattern.

The effects of this trend are evident in the 1998 data for State and county mental hospitals. These facilities show a continued decline in their year-end resident patients and number of inpatient and residential beds, as many State governments struggle to reduce their budgets by eliminating costly hospital and residential programs, stressing community care, and preventing admission to psychiatric beds when possible. This is becoming even more critical as responsibilities continue to shift to States. The shift to nonresidential care is shown by the stability from 1994 to 1998 in additions to less than 24-hour care at State and county hospitals (decrease of 0.1 percent) compared to a substantial drop in additions to inpatient and residential care (decrease of 14 percent).

Another factor in the decline in the number of psychiatric inpatient and residential beds may be the increased use of managed care and other cost-saving mechanisms, including the substitution of less costly care in less than 24-hour services for inpatient and residential care to further reduce the length of hospital stays, thereby reducing the cost of employee care to businesses and insurance companies. Indications are that the number of psychiatric beds may continue to decline in the foreseeable future (Redick et al. 1994a).

Patient Care Episodes

Policy implications evident from the trend data on patient care episodes involve such issues as (1) the future role of State mental hospitals, (2) the balance between community-based and State mental hospital services, (3) the balance between hospital and residential and ambulatory services, and (4) the contracting by State mental health agencies for the provision of services through the private sector.

As the number of hospital and residential episodes in State mental hospitals has continued to decline, policymakers are confronted with momentous decisions regarding these organizations. Of particular importance is the question of whether these facilities should be expanded, or, conversely, closed. At one extreme, some argue that these hospitals have contracted in size to such an extent that persons with severe mental illness are being denied admission, and therefore, further downsizing is unwise. By contrast, others argue that all persons, regardless of the severity of their mental illness, can be cared for in the community and that the State mental hospitals should be phased out entirely. Confounding the options of the policymakers are economic pressures brought by communities and labor unions to keep the State mental hospitals open and to increase their size.

State mental health agencies favor the expansion of community-based services at the expense of State mental hospital services. In addition, Federal legislation promotes community-based services to the exclusion of State mental hospital services in the distribution of community mental health service block grant funds to the States. Furthermore, between 1955 and 1994, aftercare services shifted from the State mental hospitals to community-based facilities. Despite these facts, State mental hospitals still consumed almost half of total expenditures by State mental health agencies in 1994. In light of this situation, one of the major issues facing the mental health community today is how to strike a balance between the services of community-based mental health agencies and those provided by State mental hospitals.

The proper balance of hospital and residential and ambulatory services needs to be examined for treatment efficacy, as well as for cost-benefit. Although the percentage of less than 24-hour care is now much greater than it was between 1955 and 1971, the proportion has remained almost the same since 1975. Decisions will have to be made about the role of ambulatory versus hospital and residential services and, in particular, about whether or not ambulatory services should be increased at the expense of hospital and residential services.

Staffing

Accompanying the increase in the number of mental health organizations and their caseloads during the 1970–94 period has been an increase in the number of FTE staff employed by these organizations. Most of this increase (62 percent of the total increase) occurred among the professional patient care staff, notably in the number of psychiatrists, psychologists, social workers, registered nurses, and other mental health professionals, in contrast to paraprofessional mental health workers (licensed practical nurses, aides, and orderlies) and support staff (administrative, clerical, and maintenance staff). The number of professional staff increased by 123 percent, compared to 54 percent for support staff and 4 percent for paraprofessional staff. This can be attributed in large part to the expansion of community-based mental health care services during this period, which has led to a greater emphasis on short-term hospital and residential as well as less than 24-hour care and partial care services, with the primary goal of keeping clients functioning in their own communities.

A feature of the contemporary evolution of health care service has been the replacement of higher cost professionals, particularly physicians, with other staff in less expensive labor categories, such as registered nurses and other mental health care workers. While the overall number of FTE staff in all mental health organizations increased in the 24 years between 1972 and 1994, the number of physicians serving these mental health institutions experienced a gradual decrease, especially since the beginning of the 1990's, and by 1994 the number of psychiatrists had fallen from its 1992 peak. While the 1970's and 1980's saw increases in all labor categories, recent data suggest that growth in higher paying labor categories is flat, and in some categories, a noticeable decline is occurring.

As the trends in the number and rates per population associated with hospital and residential care (e.g., decreases in resident patients and psychiatric beds) appear to be leveling off, and policies regarding the effectiveness of long-term hospital and residential care versus short-term hospital and residential and ambulatory care come under review, assessment must be given to the future human resource needs of mental health organizations, particularly as to whether the supply of paraprofessional and professional mental health care workers needs to be augmented or selectively reduced. Consideration also needs to be given to the substitutability of staff disciplines in certain situations.

Managed Care

In 1994, 40 percent of all mental health organizations were a part of one or more managed care networks. Of the specific organization types, private psychiatric hospitals and non-Federal general hospitals with separate psychiatric services were the largest percentage of managed care participants, 62 and 63 percent, respectively. The next largest percentages were all others (32 percent) and RTCs (18 percent), and the least likely managed care participants were State mental hospitals and VA medical centers, at 4 percent each.

Expenditures

With the advent of health care reform, much interest has developed in the role of inflation in the increase of expenditures by mental health organizations. Since both the number of private psychiatric hospitals and the expenditures they incurred increased dramatically between 1969 and 1994, these hospitals showed gains in absolute dollar amounts and in dollar amounts per capita (except for 1990), even if the expenditures are expressed in constant dollars. Although in 1994, non-Federal general hospitals with psychiatric services and the residential treatment centers for emotionally disturbed children showed increases in expenditures and per capita as measured in current dollars, these hospitals showed a decrease if measured in constant dollars. Yet their 24-hour care population continued to increase. Only private psychiatric hospitals and "all other mental health organizations" show increased expenditures in both current and constant dollars and in per capita in 1994.

Mental Health Services Data by State

In conjunction with the preparation of national data for this chapter, CMHS tabulated the 1998 Survey data by State. In recent years, these State data have become increasingly important for managers of State mental health agencies, enabling them to compare their program statistics with those of other States and with national totals. In addition, State legislators, budget officers, and planners of mental health services frequently ask program administrators to furnish comparable statistical information from other States. Although State populations, programs, services, and funding patterns differ somewhat, State mental health program directors have usually identified enough similarities between their State and one or several others to make statistical comparisons. Among the most important factors in selecting other States for comparison is the need for States to have similarly organized services as well as somewhat similar populations. Geographical proximity may also be a relevant factor.

Tables 10, 10a, and 10b show the number of facilities in each State in each of the six facility types. Table 10 shows the number of facilities offering any services. Table 10a displays the number providing 24-hour hospital inpatient and residential care; Table 10b lists the number in each State providing outpatient care. All three tables compare the number of facilities in 1998 with the numbers in 1992 and 1994.

Figures 14 through 16 show three key variables by State: inpatient and residential treatment beds, inpatient and residential treatment additions, and outpatient additions. All three maps display rates per 100,000 civilian population on July 1, 1998. Psychiatric inpatient and residential treatment beds (Figure 14) are least common in the western States and most common in the east, especially the northeast. South Dakota has an unusually high rate of inpatient and residential beds for a western State, and South Carolina stands out among the eastern States for a low bed rate. Mississippi is also surrounded by States with markedly lower bed rates. Inpatient additions (Figure 15) display a similar regional pattern, being less frequent in the western States than in the eastern, although the area of lowest addition rates is farther west, mostly west of the Great Plains. A band of high admission rates extends from Kentucky westward through Missouri to Kansas and Oklahoma, and many of the adjacent States also have relatively high addition rates. In the east, New Jersey rather than South Carolina has the lowest rate. Outpatient additions (Figure 16) have a third pattern. There are three clusters of States with relatively high outpatient admission rates: New England; the Ohio Valley States of Ohio, Indiana, and Kentucky; and the northern Plains States and adjacent Wyoming, and even extending to Minnesota, Iowa, and Kansas. Low outpatient admission rates are found in most of the States bordering Arkansas, which itself has a relatively high rate; in Idaho, Nevada, Utah, and Colorado; and in an arc of States from New York to Georgia, or even as far as Texas, with the exception of Alabama.

Data for 1994, which are similar to those presented in the figures, are available in *Mental Health United States, 1998*. Moreover, comparative State data for 1983, 1986, and 1988 can be found in *Mental Health, United States, 1992;* for 1986, 1988, and 1990 in *Mental Health, United States, 1994;* and for 1986, 1990, and 1992 in *Mental Health, United States, 1996.*

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Table 10. Number of mental health organizations by type of organization and State: United States, 1992, 1994, and 1998

State/territory	State and county			Private psychiatric			Non-Federal general			VA medical centers			RTCs			All other mental health organizations		
	1992	1994	1998	1992	1994	1998	1992	1994	1998	1992	1994	1998	1992	1994	1998	1992	1994	1998
Total, United States	278	260	234	478	433	351	1,620	1,616	1,709	163	162	146	497	459	462	2,476	2,492	2,843
Excluding territories	273	256	229	475	430	348	1,616	1,612	1,707	162	161	145	497	459	461	2,460	2,474	2,832
Alabama	6	5	6	4	4	3	33	31	35	3	3	3	4	4	4	26	25	33
Alaska	1	1	1	2	2	1	3	4	7	1	1	1	2	2	7	35	35	44
Arizona	1	1	1	13	9	9	12	14	16	3	3	3	9	7	8	16	26	38
Arkansas	1	1	1	6	6	8	17	20	28	2	2	2	4	1	1	17	18	20
California	6	5	8	58	48	45	119	124	136	12	12	11	47	43	49	211	205	299
Colorado	3	3	2	6	6	7	19	19	18	3	3	3	13	12	12	20	24	24
Connecticut	8	5	3	6	6	5	27	25	26	3	3	2	6	7	6	74	101	88
Delaware	2	2	1	2	2	2	6	5	5	1	1	1	7	6	4	9	14	11
District of Columbia	1	1	1	1	1	1	8	8	7	1	1	1	1	2	1	33	24	19
Florida	8	8	5	35	27	24	60	65	65	4	4	6	12	14	18	58	65	105
Georgia	8	8	4	15	15	14	33	31	33	3	3	3	3	4	4	33	28	36
Hawaii	1	1	1	0	1	1	8	8	8	1	1	1	2	1	0	14	27	17
Idaho	2	2	2	6	4	2	4	4	6	1	1	1	2	2	1	18	16	12
Illinois	12	12	11	12	11	7	88	89	88	6	6	6	23	20	25	131	129	141
Indiana	8	6	6	18	21	15	42	42	46	3	3	2	9	9	10	13	18	68
Iowa	5	5	4	0		0	33	35	35	3	3	2	8	8	8	40	41	42
Kansas	4	4	3	9	7	4	24	23	23	3	3	2	5	6	5	28	28	27
Kentucky	4	4	4	9	9	8	28	28	31	2	2	2	11	9	7	15	15	19
Louisiana	6	6	6	21	17	11	33	35	45	3	3	3	5	3	2	48	48	47
Maine	2	2	2	1	2	1	9	9	10	1	1	1	3	2	3	32	34	29
Maryland	9	9	8	7	6	5	29	28	26	3	3	1	11	9	10	56	52	48
Massachusetts	8	6	6	11	11	9	63	55	59	4	4	4	47	38	31	115	97	108
Michigan	12	8	7	8	9	8	67	66	69	4	4	5	20	17	16	91	89	78
Minnesota	7	6	5	2	1	1	39	32	35	2	2	2	16	17	19	106	108	118
Mississippi	2	2	2	4	4	4	11	12	26	2	2	2	2	3	3	17	16	16

Table 10. Number of mental health organizations by type of organization and State: United States, 1992, 1994, and 1998 (continued)

State/territory	State and county			Private psychiatric			Non-Federal general			VA medical centers			RTCs			All other mental health organizations		
	1992	1994	1998	1992	1994	1998	1992	1994	1998	1992	1994	1998	1992	1994	1998	1992	1994	1998
Missouri	8	9	9	8	9	8	50	52	53	4	4	5	14	13	13	39	40	34
Montana	1	1	1	4	2	2	5	4	5	1	1	1	2	1	2	5	6	4
Nebraska	3	3	3	2	2	1	9	10	7	3	3	3	3	2	6	23	25	22
Nevada	2	3	3	3	3	4	3	4	4	2	2	2	1	1	1	3	2	5
New Hampshire	1	1	1	3	3	3	12	10	11	1	1	1	0	9	8	10	17	16
New Jersey	11	12	10	5	5	7	51	50	50	2	2	1	12	11	10	57	63	68
New Mexico	2	2	2	7	6	4	7	8	9	1	1	1	16	18	13	28	28	34
New York	32	30	23	15	12	12	106	110	113	12	11	6	32	28	27	186	174	182
North Carolina	4	4	4	11	9	6	43	42	44	4	4	4	8	6	7	34	35	37
North Dakota	1	1	1	0	0	0	7	7	7	1	1	1	2	1	1	8	8	8
Ohio	15	13	9	10	9	8	82	79	84	5	5	4	26	25	14	185	180	166
Oklahoma	4	3	5	10	11	9	21	26	32	2	2	2	1	0	0	64	55	47
Oregon	3	3	2	1	1	1	13	12	15	3	3	2	11	13	17	58	65	84
Pennsylvania	13	13	11	24	25	18	103	104	112	9	9	8	22	18	22	148	146	126
Rhode Island	1	0	0	2	2	2	7	5	4	1	1	1	2	1	1	14	16	16
South Carolina	5	5	4	5	5	4	14	15	16	2	2	2	3	2	3	17	18	17
South Dakota	1	1	1	1	1	0	3	3	5	3	3	2	4	4	4	13	14	14
Tennessee	5	5	5	12	11	7	47	48	41	4	4	4	6	5	5	33	31	26
Texas	8	9	7	61	48	35	77	77	75	10	10	8	13	10	12	48	47	53
Utah	1	1	2	6	6	2	15	11	9	1	1	1	2	2	2	13	11	11
Vermont	1	1	1	1	1	1	5	5	3	1	1	1	5	5	4	10	10	10
Virginia	10	10	10	13	14	10	39	39	43	3	3	3	5	5	4	46	49	45
Washington	3	3	3	3	3	2	22	22	22	4	4	3	11	10	9	58	55	84
West Virginia	2	2	2	3	3	2	11	13	14	4	4	4	3	2	2	15	15	15
Wisconsin	8	7	9	8	9	4	45	40	42	3	3	3	16	16	15	73	66	205
Wyoming	1	1	1	1	1	1	4	4	4	2	2	2	5	5	5	16	15	16

Table 10a. Number of mental health organizations providing either 24-hour hospital or residential services, by type of organization and State: United States, 1992, 1994, and 1998

State/territory	State and county			Private psychiatric			Non-Federal general			VA medical centers			RTCs			All other mental health organizations		
	1992	1994	1998	1992	1994	1998	1992	1994	1998	1992	1994	1998	1992	1994	1998	1992	1994	1998
Total, United States	278	260	234	478	433	351	1,520	1,534	1,594	134	136	124	497	459	462	526	1,023	977
Excluding territories	273	256	229	475	430	348	1,517	1,531	1,593	133	135	123	497	459	461	520	1,016	975
Alabama	6	5	6	4	4	3	33	31	34	2	2	2	4	4	4	13	20	20
Alaska	1	1	1	2	2	1	3	4	5	0	0	0	2	2	7	6	15	15
Arizona	1	1	1	13	9	9	10	13	15	2	2	3	9	7	8	13	10	13
Arkansas	1	1	1	6	6	8	17	19	26	2	2	2	4	1	1	7	11	12
California	6	5	8	58	48	45	104	110	121	8	8	8	47	43	49	50	64	72
Colorado	3	3	2	6	6	7	17	18	17	3	3	2	13	12	12	11	16	12
Connecticut	8	5	3	6	6	5	24	23	24	3	3	2	6	7	6	2	27	23
Delaware	2	2	1	2	2	2	5	5	5	1	0	0	7	6	4	0	5	4
District of Columbia	1	1	1	1	1	1	8	8	7	1	1	1	1	2	1	2	8	4
Florida	8	8	5	35	27	24	60	64	61	4	4	6	12	14	18	32	41	57
Georgia	8	8	4	15	15	14	33	29	30	3	3	3	3	4	4	30	28	19
Hawaii	1	1	1	1	1	1	5	5	5	0	1	1	2	1	0	3	6	4
Idaho	2	2	2	6	4	2	4	4	5	1	1	1	2	2	1	0	0	0
Illinois	12	12	11	12	11	7	83	86	85	5	5	6	23	20	25	18	63	58
Indiana	8	6	6	18	21	15	41	42	45	2	2	2	9	9	10	5	17	28
Iowa	5	5	4	0	0	0	29	31	32	2	2	2	8	8	8	9	11	8
Kansas	4	4	3	9	7	4	23	23	23	3	3	2	5	6	5	5	8	3
Kentucky	4	4	4	9	9	8	28	28	31	2	2	2	11	9	7	9	10	10
Louisiana	6	6	6	21	17	11	32	35	42	3	3	3	5	3	2	2	3	3
Maine	2	2	2	1	2	1	9	9	10	1	1	1	3	2	3	7	12	12
Maryland	9	9	8	7	6	5	28	27	25	2	3	1	11	9	10	5	24	19
Massachusetts	8	6	6	11	11	9	55	50	54	4	4	4	47	38	31	26	56	57
Michigan	12	8	7	8	9	8	63	61	62	3	3	3	20	17	16	22	37	24
Minnesota	7	6	5	2	1	1	27	26	26	2	2	2	16	17	19	8	22	22
Mississippi	2	2	2	4	4	4	11	12	25	2	2	2	2	3	3	10	15	14

Table 10a. Number of mental health organizations providing either 24-hour hospital or residential services, by type of organization and State: United States, 1992, 1994, and 1998 (continued)

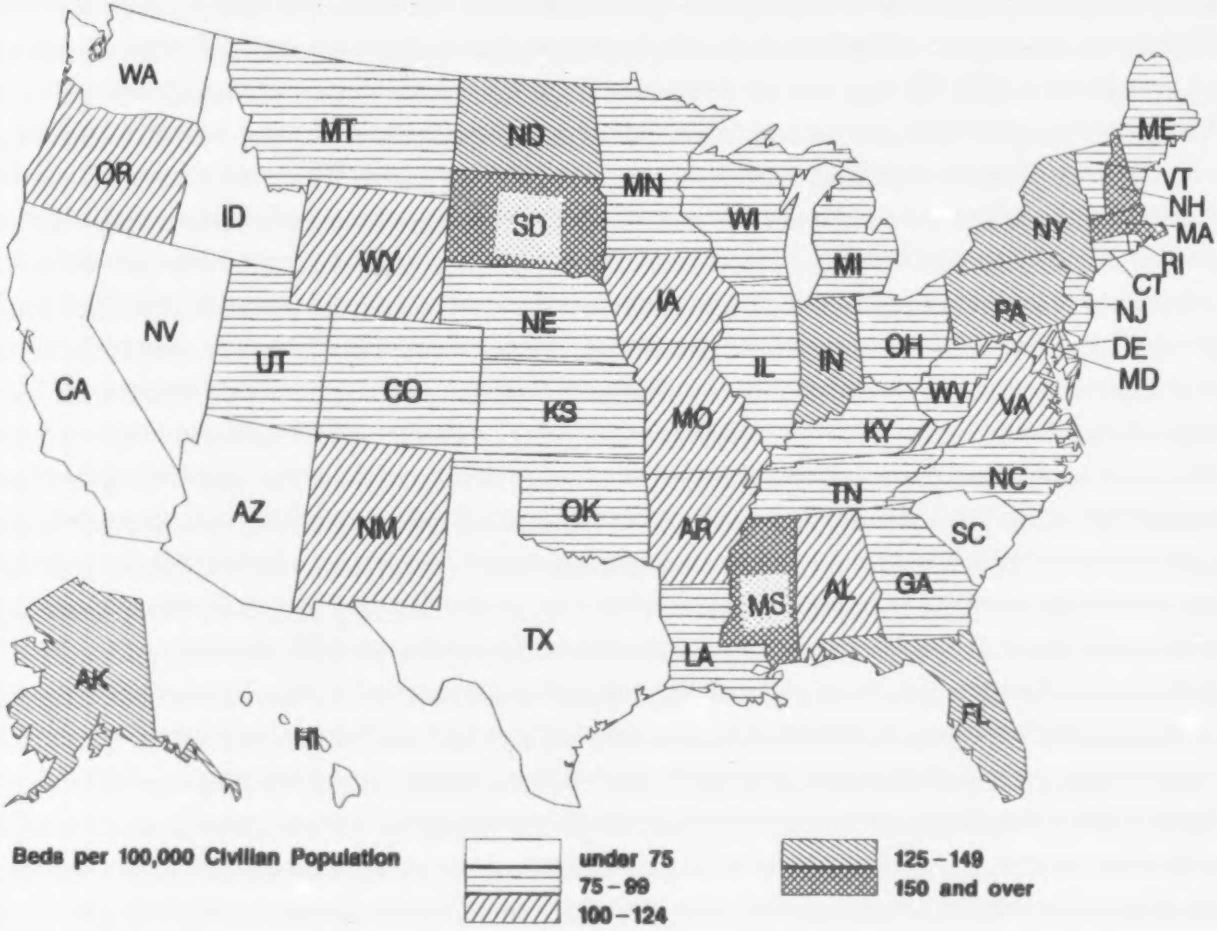
State/territory	State and county			Private psychiatric			Non-Federal general			VA medical centers			RTCs			All other mental health organizations		
	1992	1994	1998	1992	1994	1998	1992	1994	1998	1992	1994	1998	1992	1994	1998	1992	1994	1998
Missouri	8	9	9	8	9	8	46	47	49	4	4	5	14	13	13	11	18	14
Montana	1	1	1	4	2	2	4	4	5	1	1	1	2	1	2	0	5	3
Nebraska	3	3	3	2	2	1	8	10	7	2	2	2	3	2	6	2	8	8
Nevada	2	3	3	3	3	4	3	4	4	1	1	1	1	1	1	2	1	2
New Hampshire	1	1	1	3	3	3	12	10	11	1	0	0	0	9	8	4	15	15
New Jersey	11	12	10	5	5	7	47	46	43	2	2	1	12	11	10	5	27	26
New Mexico	2	2	2	7	6	4	6	8	9	1	1	1	16	18	13	5	6	8
New York	32	30	23	15	12	12	100	103	105	11	10	6	32	28	27	8	40	47
North Carolina	4	4	4	11	9	6	43	42	42	4	4	4	8	6	7	19	29	26
North Dakota	1	1	1	0	0	0	7	7	7	0	1	1	2	1	1	6	8	7
Ohio	15	13	9	10	9	8	79	76	82	4	4	4	26	25	14	43	67	61
Oklahoma	4	3	5	10	11	9	21	26	31	1	1	1	1	0	0	8	14	12
Oregon	3	3	2	1	1	1	13	12	14	3	3	2	11	13	17	4	22	24
Pennsylvania	13	13	11	24	25	18	101	102	109	5	6	5	22	18	22	18	63	53
Rhode Island	1	0	0	2	2	2	5	5	4	1	1	1	2	1	1	1	12	12
South Carolina	5	5	4	5	5	4	14	15	16	2	2	2	3	2	3	3	0	3
South Dakota	1	1	1	1	1	0	3	3	5	3	3	2	4	4	4	2	6	6
Tennessee	5	5	5	12	11	7	45	47	39	4	4	4	6	5	5	8	17	15
Texas	8	9	7	61	48	35	77	77	69	7	7	5	13	10	12	30	39	33
Utah	1	1	2	6	6	2	14	11	9	1	1	1	2	2	2	7	7	7
Vermont	1	1	1	1	1	1	5	5	3	1	1	1	5	5	4	1	9	9
Virginia	10	10	10	13	14	10	39	37	40	3	3	3	5	5	4	10	21	21
Washington	3	3	3	3	3	2	20	20	21	3	4	3	11	10	9	13	22	22
West Virginia	2	2	2	3	3	2	11	13	13	2	3	2	3	2	2	7	14	11
Wisconsin	8	7	9	8	9	4	38	34	37	3	3	3	16	16	15	7	16	15
Wyoming	1	1	1	1	1	1	4	4	4	1	1	1	5	5	5	1	4	2

Table 10b. Number of mental health organizations providing less than 24-hour hospital and residential services, by type of organization and State: United States, 1992, 1994, and 1998

State/territory	State and county			Private psychiatric			Non-Federal general			VA medical centers			RTCs			All other mental health organizations		
	1992	1994	1998	1992	1994	1998	1992	1994	1998	1992	1994	1998	1992	1994	1998	1992	1994	1998
Total, United States	77	71	62	198	348	265	619	876	966	162	149	129	167	227	211	2,186	2,435	2,771
Excluding territories	75	70	60	198	347	232	618	875	965	161	148	128	167	227	209	2,171	2,420	2,760
Alabama	0	0	0	2	4	2	5	9	11	3	3	3	0	3	3	25	24	33
Alaska	0	0	0	2	2	1	0	2	5	1	1	1	1	2	5	32	35	42
Arizona	0	0	0	8	8	8	5	7	6	3	3	2	3	5	6	21	26	36
Arkansas	0	0	0	2	6	6	2	4	7	2	2	2	3	1	1	17	18	20
California	0	1	4	16	38	28	40	71	72	12	12	11	11	21	24	178	198	290
Colorado	2	2	1	1	5	5	11	16	15	3	3	3	3	5	4	19	23	24
Connecticut	1	1	1	3	6	5	24	23	22	3	3	2	0	3	3	43	94	85
Delaware	1	1	0	0	2	2	3	2	3	1	1	1	3	2	3	8	14	11
District of Columbia	1	1	1	0	1	1	4	4	4	1	1	0	1	0	1	21	23	17
Florida	0	1	0	9	18	18	14	39	36	4	3	5	6	8	9	54	64	101
Georgia	0	0	0	9	11	9	13	19	17	3	3	2	0	1	1	33	28	36
Hawaii	0	0	0	0	1	1	4	4	4	1	0	1	1	0	0	12	25	16
Idaho	0	0	0	5	4	2	1	2	3	1	1	1	0	1	0	18	16	12
Illinois	1	0	0	4	10	7	40	55	59	6	4	5	10	13	16	113	129	137
Indiana	1	0	0	16	17	12	20	20	24	3	3	2	1	3	3	13	18	63
Iowa	3	0	0	0	0	0	12	22	28	3	3	2	2	3	6	37	39	42
Kansas	0	0	0	3	7	4	5	7	7	3	2	2	3	3	2	28	28	27
Kentucky	1	0	0	3	5	6	2	4	7	2	2	1	2	3	1	14	15	19
Louisiana	1	0	0	7	14	7	10	12	23	3	3	3	0	0	0	46	48	47
Maine	1	1	1	1	2	1	3	5	8	1	1	1	2	2	3	23	34	29
Maryland	2	1	0	5	6	5	8	15	18	3	3	1	2	6	5	41	51	47
Massachusetts	1	2	1	4	6	8	43	44	43	4	4	4	16	18	12	87	93	103
Michigan	4	2	1	3	8	7	27	48	55	4	4	5	7	9	8	90	88	78
Minnesota	0	1	1	1	0	0	30	22	24	2	2	2	5	8	5	90	101	109
Mississippi	0	0	0	2	3	3	3	6	9	2	2	2	0	1	1	18	16	15

Table 10b. Number of mental health organizations providing less than 24-hour hospital and residential services, by type of organization and State: United States, 1992, 1994, and 1998 (continued)

State/territory	State and county			Private psychiatric			Non-Federal general			VA medical centers			RTCs			All other mental health organizations		
	1992	1994	1998	1992	1994	1998	1992	1994	1998	1992	1994	1998	1992	1994	1998	1992	1994	1998
Missouri	5	5	4	2	5	5	22	28	28	4	3	4	8	9	7	38	40	34
Montana	0	0	0	0	2	2	2	3	4	1	1	1	0	0	0	5	6	4
Nebraska	0	2	2	1	1	1	4	5	3	3	2	2	1	1	2	18	23	22
Nevada	2	2	2	0	2	2	1	2	2	2	2	2	1	1	1	3	2	5
New Hampshire	0	0	0	0	3	2	1	3	6	1	1	1	0	2	0	10	15	14
New Jersey	1	1	0	4	5	6	28	32	31	2	2	0	3	3	3	50	59	65
New Mexico	0	1	1	3	5	3	3	3	5	1	1	1	4	6	5	23	28	33
New York	29	28	19	4	5	5	68	71	72	11	10	6	12	15	13	162	173	178
North Carolina	0	0	0	8	7	6	6	13	17	4	3	1	6	4	5	34	35	36
North Dakota	0	0	0	0	0	0	4	4	5	1	1	1	0	0	0	8	8	8
Ohio	1	2	3	9	9	6	26	48	57	5	4	4	15	18	8	169	177	165
Oklahoma	2	1	3	5	11	7	5	11	13	2	2	2	0	0	0	64	54	46
Oregon	0	0	0	0	0	0	5	8	11	3	3	2	6	8	5	51	64	78
Pennsylvania	0	0	0	12	18	13	38	46	53	9	9	7	6	11	10	114	144	125
Rhode Island	0	0	0	2	1	2	4	3	3	1	0	0	0	1	0	14	16	16
South Carolina	0	0	1	1	2	2	3	8	10	2	2	2	2	1	2	17	18	17
South Dakota	1	1	1	1	1	0	1	1	1	3	2	2	1	3	2	13	14	14
Tennessee	0	1	0	5	8	6	7	15	13	4	4	4	4	4	4	30	31	26
Texas	7	7	5	17	45	31	15	37	41	10	10	8	3	1	2	47	47	53
Utah	0	0	0	3	6	0	9	8	6	1	1	1	0	1	1	13	11	10
Vermont	0	0	0	0	0	0	0	0	0	1	1	1	0	1	1	10	10	10
Virginia	2	1	1	7	14	9	5	18	26	3	2	2	1	1	1	45	49	45
Washington	0	1	1	1	2	2	8	11	10	4	4	2	5	6	5	56	55	84
West Virginia	0	0	0	1	2	0	0	4	6	4	4	4	0	1	1	15	15	15
Wisconsin	5	3	6	5	8	4	22	29	30	3	3	2	5	5	7	65	63	202
Wyoming	0	0	0	1	1	1	2	2	2	2	2	2	2	3	3	16	15	16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Beds per 100,000 Civilian Population
under 75
75 - 99
100 - 124
125 - 149
150 and over

Figure 14. Total psychiatric inpatient and residential treatment beds per 100,000 civilian population in mental health organizations, by State: United States, 1998

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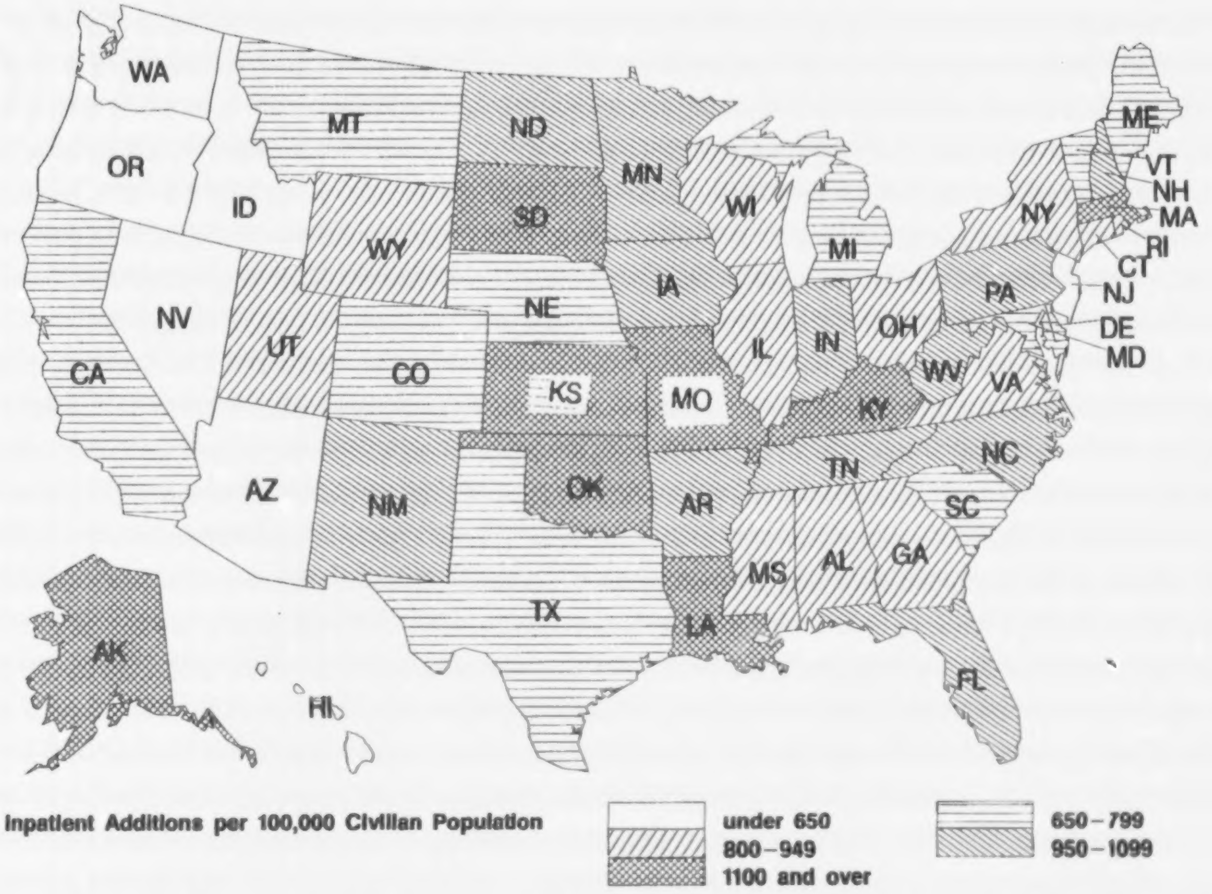
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Inpatient Additions per 100,000 Civilian Population
under 650
650–799
800–949
950–1099
1100 and over

Figure 15. Number of inpatient and residential treatment additions per 100,000 civilian population to mental health organizations, by State: United States, 1998

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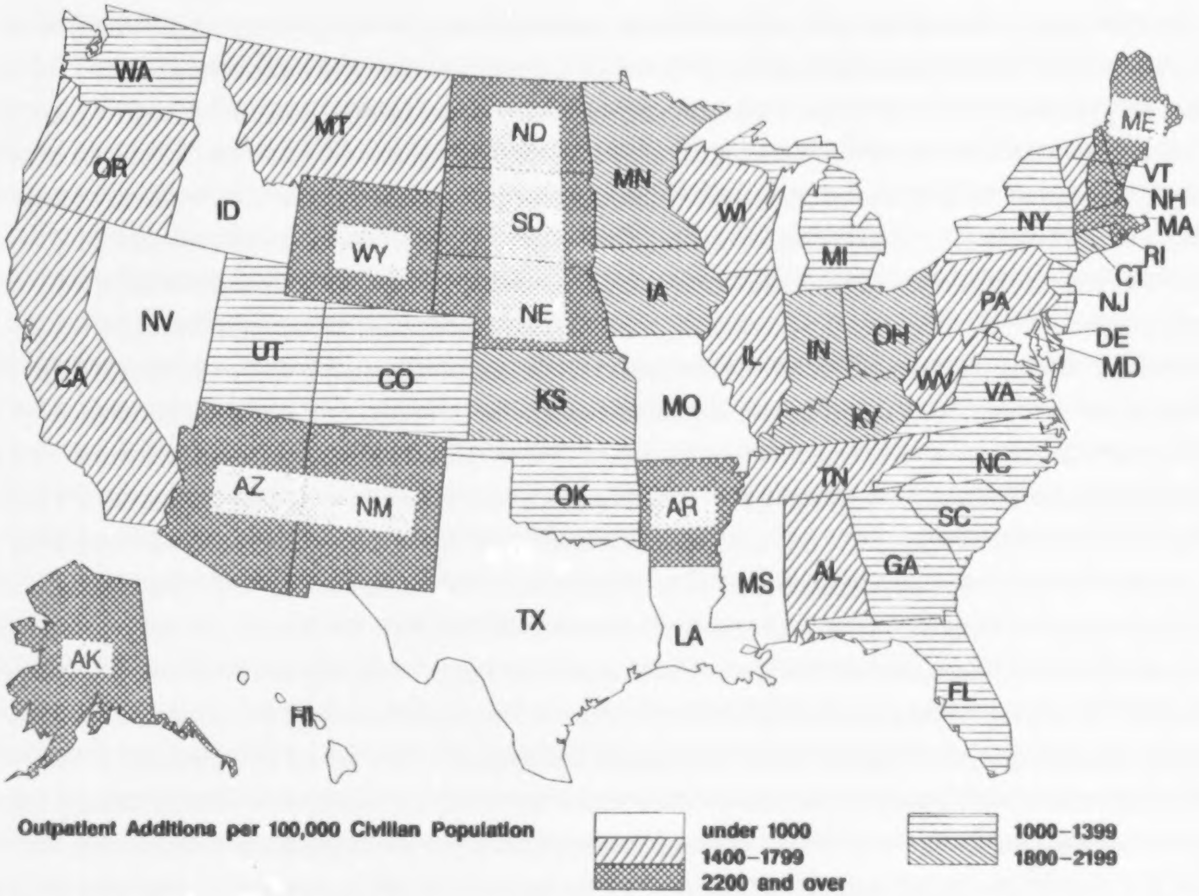
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HI
Outpatient Additions per 100,000 Civilian Population
under 1000
1000-1399
1400-1799
1800-2199
2200 and over

Figure 16. Number of outpatient additions per 100,000 civilian population to mental health organizations, by State: United States, 1998

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Chapter 15

Persons Treated in Specialty Mental Health Care Programs, United States, 1997

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Introduction

In 1997, the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services (CMHS), SAMHSA, conducted a nationwide sample survey of persons receiving care in the inpatient, residential, and less than 24-hour care[1] programs of specialty mental health organizations, the *1997 Client/Patient Sample Survey* (hereafter, *1997 CPSS*). This survey was designed to collect statistical information on the demographic, clinical, and service use characteristics of this treated population, and to provide national estimates that reflect the current picture of this population within the Nation's specialty mental health service delivery system. The survey included a sample of persons who received care in a sample of the programs of specialty mental health organizations included in Chapter 14 of this publication. The following types of organizations were included: State and county mental hospitals, private psychiatric hospitals, the separate psychiatric services of the Department of Veterans Affairs (VA) medical centers and of non-Federal general hospitals, multiservice mental heath organizations, residential treatment centers for emotionally disturbed children, other residential programs, and freestanding outpatient clinics and partial care organizations. The *1997 CPSS* represents the first national cross-sectional sample survey since 1986 of persons served by specialty mental health organizations, and the first survey to collect such information about residential care programs.

This chapter provides preliminary national estimates from the *1997 CPSS* on the numbers and characteristics of persons admitted during 1997 and persons under care on a single day in 1997 in the inpatient, residential, and less than 24-hour care programs of specialty mental health organizations. These two groups of persons—persons admitted during 1997 and persons under care on a single day, when added together, give us a picture of the total people receiving services within these mental health programs during 1997. Comparison of the numbers and characteristics of the two groups provides a way to look at changes over time in those receiving treatment; the longer persons remain in care, the more differences we can observe between persons entering the programs and those under care. A larger number of admissions than persons under care is an indication of turnover within the system, whereas larger numbers of persons under care reflect a more stable caseload. These types of interpretations might be useful tools to consider when reading subsequent sections of this chapter. Each section includes a brief analysis by program type (inpatient, residential, less than 24-hour) and by organization type for selected characteristics of the two client groups.

Overall, approximately 2.3 million persons were under care and 5.5 million persons were admitted during 1997 to specialty mental health inpatient, residential, and less than 24-hour care programs. These persons were largely concentrated in the less than 24-hour care programs, where approximately 2.2 million persons were under care and 3.3 million persons were admitted in 1997 (Table 1). By contrast, inpatient programs had a little more than 116 thousand persons under care and an estimated 2 million admissions during 1997. Residential care programs were by far the smallest in size of the three program types, with about 83 thousand persons under care and 171 thousand admissions.

Figure 1 illustrates that the relative sizes of the under care and admission populations differed considerably among the three program types. In inpatient programs, where only small proportions of patients become part of the long-term caseload, the number of admissions was almost 18 times the number of persons under care. By contrast, persons

Table 1. Overview—Number and percent distribution of persons under care and admissions to inpatient, residential and less than 24-hour care programs, by type of mental health organization: United States, 1997

	Mental Health Organization							
Type of program	**Total, all mental health programs**	**State/ county mental hospitals**	**Private psychiatric hospitals**	**Non-Federal general hospitals**	**VA medical centers**	**Multiservice mental health organizations**	**RTCs for emotionally disturbed children**	**Freestanding outpatient clinics and partial care organizations**
	Estimated persons under care on May 1, 1997							
Inpatient								
Number	116,224	54,015	17,456	28,951	6,657	*	NA	NA
Percent	100.0	46.5	15.0	24.9	5.7	*	NA	NA
Residential**								
Number	82,916	**	**	**	**	**	27,642	NA
Percent	100.0	**	**	**	**	**	33.3	NA
Less than 24-hour								
Number	2,150,662	41,829	54,193	300,686	149,610	884,613	79,764	639,967
Percent	100.0	1.9	2.5	14.0	7.0	41.1	3.7	29.8
	Estimated admissions during 1997							
Inpatient								
Number	2,035,094	190,183	497,650	1,035,229	101,700	210,332	NA	NA
Percent	100.0	9.4	24.4	50.9	5.0	10.3	NA	NA
Residential**								
Number	171,407	**	**	**	**	**	43,365	NA
Percent	100.0	**	**	**	**	**	25.3	NA
Less than 24-hour								
Number	3,333,215	34,314	209,092	597,319	135,985	1,365,854	97,990	892,661
Percent	100.0	1.0	6.3	17.9	4.1	41.0	2.9	26.8

Source: *1997 Client/Patient Sample Survey.* Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.

NA Not applicable

* Estimate is based on five or fewer sample cases or estimate has a relative standard error of 50% or higher. The estimate is not shown because it does not meet standards of relability.

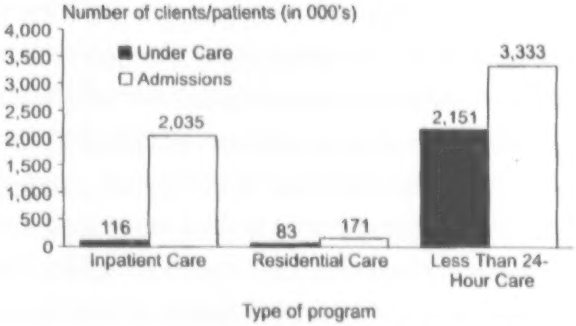
** Residential care programs of State and county mental hospitals, private psychiatric hospitals, non-Federal general hospitals, VA medical centers, and multiservice mental health organizations are included in the total column, but are not detailed separately.

Note: Percentages may not add to 100% because of rounding.

tend to receive longer-term care in both residential care programs (where admissions were only about 2 times the number of persons under care) and less than 24-hour care programs (where admissions were about 1½ times the number of persons under care).

The text that follows presents major highlights on the gender, race, ethnicity, age, and diagnostic characteristics of these client/patient groups in the different types of mental health programs. Inpatient programs are described first, followed by residential, then less than 24-hour care programs. Within each section, each client/patient characteristic is examined for the under care population first, followed by the admission population.

In the *1997 CPSS*, the following categories were used to report race: American Indian or Alaska Native, Asian or Pacific Islander, Black, and White. Ethnicity was collected through a separate question requesting information on Hispanic origin. Throughout this chapter, analyses combine race and ethnicity into these five categories: American Indi-



Source: 1997 CPSS, SAB/DSCSD/CMHS/SAMHSA/DHHS

Figure 1. The under care and admission populations in inpatient, residential, and less than 24-hour care programs, specialty mental health organizations, United States, 1997

an or Alaska Native (not Hispanic), Asian or Pacific Islander (not Hispanic), Black or African American (not Hispanic), White (not Hispanic), and Hispanic or Latino. In general, the three largest racial/ethnic groups were Black/African American, White, and Hispanic/Latino; the two remaining racial/ethnic categories had very small numbers of sample cases. For this reason, when comparing the distributions of race and ethnicity across organization types, analyses in this chapter focus primarily on the three largest groups.

A brief description of the survey design, estimation procedures, variance calculations, and statistical significance calculations is provided in Appendix B. All differences noted in the text are statistically significant at the $p = 0.05$ level or less. Lack of comment on the differences between any two estimates does not imply that a test was completed with a finding of no statistical significance. For example, the inpatient, residential, and less than 24-hour care programs of VA medical centers almost exclusively serve males. This could be expected and is not necessarily discussed further within the text, even though differences between males and females were statistically significant.

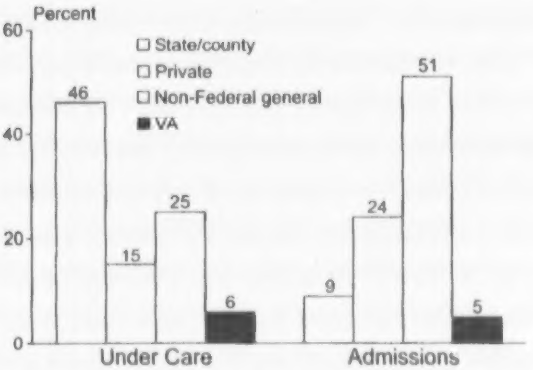
Counts presented in this chapter vary somewhat from totals shown in Chapter 14 for several reasons: (1) Estimates reported in this chapter are based on samples of organizations and persons rather than on complete enumerations. (2) *SMHO* totals for admissions are duplicated within an organization; *1997 CPSS* estimates are not duplicated within the survey month, but they could be duplicated when inflating to an annual estimate of admissions. (3) The universe of mental health organizations used as the sampling frame for the *1997 CPSS* was from the 1994 inventory; new mental health programs that came into existence between 1994 and 1997 were not included in the sampling frame. To the extent that rapid growth occurred in a particular type of program, counts based on estimates from the *1997 CPSS* may be lower than *SMHO* totals and may be less representative of the entire client/patient population for that type of program in 1997. This could be expected to occur more frequently in less than 24-hour care programs than in inpatient. Thus, the sample produces a somewhat lower estimate than does the inventory. (4) Measurement and definitional errors stemming from lack of consensus within the mental health field itself are reflected in estimates from both surveys.

Inpatient Care Programs

Table 1 and Figure 2 show the distributions of the under care and admission populations in inpatient programs by type of organization. Almost half (46 percent) of the total 116,224 persons under care in inpatient programs were resident in State/county mental hospitals; one quarter (25 percent) were resident in non-Federal general hospitals. This contrasts with the admission population of 2,035,094; only 9 percent of admissions entered State/county mental hospitals, while more than half (51 percent) entered non-Federal general hospitals. Although the State/county mental hospital system has increasingly shifted its role over time from long-term care to acute care, it is still recognized as a major provider of long-term care within the specialty mental health sector. By contrast, the non-Federal general hospital system is devoted almost exclusively to acute care.

Gender, Race, and Ethnicity of Persons Under Care in Inpatient Programs

- Overall, of the estimated 116,224 persons under care in specialty inpatient programs on May 1, 1997, 71,909 (62 percent) were males, compared with only 44,315 (38 percent) females (Table 2). The proportion of males was much greater than that of females in State/county mental hospitals (70 vs. 30 percent) and in VA medical centers (95 vs. 5 percent); males and females were about equally represented in private psychiatric hospitals



Source: 1997 CPSS, SAB/DSCSD/CMHS/SAMHSA/DHHS
Note: Multiservice mental health organizations are not shown; under care estimates are not reliable

Figure 2. Distribution of the under care and admission populations, inpatient programs of specialty mental health organizations, United States, 1997

and non-Federal general hospitals. Greater percentages of males than females were under care within each racial/ethnic group, with the exception of Asians/Pacific Islanders, where differences observed were not statistically significant (Table 2). Only among Whites within non-Federal general hospitals did females comprise a significantly larger percentage of the under care caseload than males (57 vs. 43 percent).

- When compared with their numbers in the U.S. civilian population, similar findings also held for the rates of males versus females, overall (56 vs. 32 per 100,000 population) and within each racial/ethnic group, with the exception of Asians/Pacific Islanders, for whom rates were fairly close by gender (Table 2). The difference in under care rates among American Indians/Alaska Natives was particularly pronounced; the male rate was more than 3½ times the female rate (78 vs. 21 per 100,000 population). Similarly, the under care rates for males and females who were Black/African American differed considerably; the male rate was more than 2½ times the female rate (123 vs. 48 per 100,000 population).

- Overall, Whites accounted for 77.7 thousand—or two-thirds of the total of 116 thousand—persons under care in inpatient settings (Table 2). Blacks/African Americans comprised the second largest racial/ethnic group, accounting for 26.7 thousand, almost one-fourth of the total persons under care, followed by Hispanics/Latinos, who accounted for 9.7 thousand, or about 8 percent of persons under care. The two remaining racial/ethnic groups each accounted for less than 1 percent of persons under care. Figure 3 shows that within each type of inpatient organization, Whites comprised the largest percentage of the under care population, followed by Blacks/African Americans, then Hispanics/Latinos. The single exception to this pattern occurred in private psychiatric hospitals, where the difference observed between the percentage of Blacks/African Americans and Hispanics/Latinos is not statistically significant.

- Compared with their numbers in the U.S. civilian population, overall, Blacks/African Americans had the highest under care rate (171 per 100,000 population), and Asians/Pacific Islanders had the lowest overall rate (23 per 100,000 population; Table 2); the rates for remaining racial/ethnic groups were generally clustered between these two extremes.

- Where comparisons are possible across the various types of organizations, it can be seen that State/county mental hospitals had the highest under care rates per 100,000 population, for all racial/ethnic groups combined, as well as for Blacks/African Americans, Whites, and Hispanics/Latinos, both overall and for males (Table 2). The male rate in State/county mental hospitals was 29 per 100,000 population; the second highest rate among males under care was found in non-Federal general hospitals (10 per 100,000 population). In general, among females, the rates per 100,000 population varied less across organization types than male rates. The rates for females in State/county mental hospitals and non-Federal general hospitals were about the same (12 and 11 per 100,000 population, respectively), and greater than the rates for females in private psychiatric hospitals (6 per 100,000 population) and VA medical centers (less than 1 per 100,000 population).

Table 2. Inpatient under care—Number, percent distribution, and rate per 100,000 U.S. civilian population[1] of persons under care, by race/ethnicity, gender, and type of inpatient psychiatric care program: United States, 1997

	Inpatient psychiatric care program				
Race/ethnicity and gender	**Total, all inpatient programs[2]**	**State/ county mental hospitals**	**Private psychiatric hospitals**	**Non-Federal general hospitals**	**VA medical centers**
			Number		
Total	116,224	54,015	17,456	28,951	6,657
Male	71,909	37,792	8,584	13,644	6,314
Female	44,315	16,223	8,872	15,307	343
American Indian or Alaska Native	962	593	102	*	*
Male	755	*	*	*	*
Female	207	*	*	*	—
Asian or Pacific Islander	1,081	656	*	*	—
Male	601	*	*	*	—
Female	480	*	*	*	—
Black or African American	26,695	14,025	3,181	6,225	2,167
Male	18,571	10,025	1,820	3,525	2,160
Female	8,124	4,000	1,361	2,700	*
White	77,738	33,235	12,478	20,470	4,007
Male	45,298	22,679	5,741	8,784	3,708
Female	32,440	10,556	6,737	11,686	299
Hispanic or Latino	9,748	5,506	1,542	1,861	415
Male	6,684	4,118	888	1,190	378
Female	3,064	1,388	654	671	*
			Percent distribution		
Total	100.0	100.0	100.0	100.0	100.0
Male	61.9	70.0	49.2	47.1	94.8
Female	38.1	30.0	50.8	52.9	5.2
American Indian or Alaska Native	100.0	100.0	100.0	*	*
Male	78.5	*	*	*	*
Female	21.5	*	*	*	—
Asian or Pacific Islander	100.0	100.0	*	*	—
Male	55.6	*	*	*	—
Female	44.4	*	*	*	—
Black or African American	100.0	100.0	100.0	100.0	100.0
Male	69.6	71.5	57.2	56.6	99.7
Female	30.4	28.5	42.8	43.4	*
White	100.0	100.0	100.0	100.0	100.0
Male	58.3	68.2	46.0	42.9	92.5
Female	41.7	31.8	54.0	57.1	7.5
Hispanic or Latino	100.0	100.0	100.0	100.0	100.0
Male	68.6	74.8	57.6	63.9	91.1
Female	31.4	25.2	42.4	36.1	*

Table 2. Inpatient under care—Number, percent distribution, and rate per 100,000 U.S. civilian population[1] of persons under care, by race/ethnicity, gender, and type of inpatient psychiatric care program: United States, 1997 (continued)

Race/ethnicity and gender	Inpatient psychiatric care program				
	Total, all inpatient programs[2]	State/ county mental hospitals	Private psychi-atric hospitals	Non-Federal general hospitals	VA medical centers
	Rate per 100,000 civilian population[1]				
Total	43.7	20.3	6.6	10.9	2.5
Male	55.5	29.2	6.6	10.5	4.9
Female	32.4	11.9	6.5	11.2	0.3
American Indian or Alaska Native	99.0	61.1	10.5	*	*
Male	78.3	*	*	*	*
Female	20.7	*	*	*	—
Asian or Pacific Islander	23.1	14.2	*	*	—
Male	13.3	*	*	*	—
Female	9.8	*	*	*	—
Black or African American	171.1	90.1	20.1	39.3	14.4
Male	123.2	66.5	12.1	23.4	14.3
Female	47.9	23.6	8.0	15.9	*
White	80.7	34.7	12.9	21.1	4.2
Male	48.0	24.0	6.1	9.3	3.9
Female	32.6	10.6	6.8	11.8	0.3
Hispanic or Latino	67.3	38.0	10.7	12.9	2.9
Male	46.0	28.3	6.1	8.2	2.6
Female	21.4	9.7	4.6	4.7	*

Source: *1997 Client/Patient Sample Survey.* Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.

[1] U.S. Bureau of the Census population estimates for May 1997 are used as denominators for rate computations.

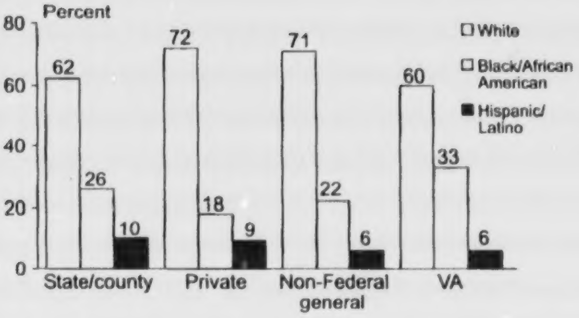
[2] Multiservice mental health organizations are included in the total column, but are not detailed separately.

* Estimate is based on five or fewer sample cases or estimate has a relative standard error of 50% or higher. The estimate is not shown because it does not meet standards of reliability.

Note: Percentages may not add to 100% because of rounding.

Gender, Race, and Ethnicity of Persons Admitted to Inpatient Programs

- Of the estimated 2,035,094 million inpatient admissions in 1997, approximately 1,097,127 (54 percent) were males and 937,967 (46 percent) were females (Table 3). Similar to the finding for persons under care in inpatient programs, males comprised the majority of admissions, overall, and within State/county mental hospitals and VA medical centers. Males and females were about equally represented within private psychiatric hospitals and non-Federal general hospitals.
- In general, differences between the proportions of males and females were less striking among admissions than among persons under care. The overall percentage of males admitted to all inpatient care programs (54 percent; Table 3) was significantly lower than the percentage of males under care in these programs (62 percent; Table 2). However, when broken down by race/ethnicity, no sig-



Source: 1997 CPSS, SAB/DSCSD/CMHS/SAMHSA/DHHS

Figure 3. Race/ethnicity of the under care population in inpatient programs of specialty mental health organizations, United States, 1997

nificant differences existed between the proportions of males and females admitted and under care.

- Comparing rates per 100,000 population shows that similar to the under care population, for all inpatient programs combined, the male admission rate per 100,000 U.S. civilian population was higher than the female rate (848 vs. 687 per 100,000 population; Table 3). However, comparisons by race/ethnicity reveal that male rates were not significantly higher than female rates for each racial/ethnic group, holding true only among Blacks/African Americans (1,498 vs. 903 per 100,000 population).

- Unlike the under care population, where rates were highest for State/county mental hospitals, admission rates were highest in non-Federal general hospitals, further emphasizing the general hospital focus on acute care and the State/county hospital use for long-term care mentioned previously. Where comparisons can be made by race/ethnicity across organizations, data show that non-Federal general hospitals had higher admission rates than other inpatient organizations, both overall, and for both males and females within each racial/ethnic group, with the exception of Hispanics/Latinos, whose admission rates to private psychiatric hospitals and non-Federal general hospitals did not differ significantly (Table 3).

- The overall size of the admission population was dramatically larger than the under care population (2 million vs. 116 thousand; Tables 2 and 3). Similarly, rates for persons admitted were considerably greater than those for persons under care in inpatient care settings, overall, and for males and females within each of the various organizations and within each of the three largest racial/ethnic groups, Blacks/African Americans, Whites, and Hispanics/Latinos (Tables 2 and 3).

- Although the differences in size between the admission and under care populations were large, the racial/ethnic compositions of the two groups were very similar. Whites comprised the largest concentration, 1.4 million or 70 percent of total persons admitted, followed by Blacks/African Americans, 379 thousand (19 percent) and Hispanics/Latinos, 181 thousand (9 percent). Figure 4 shows that similar racial/ethnic distributions were found for State/county mental hospitals, non-Federal general hospitals, and VA medical centers. As with the under care population, the difference noted for private psychiatric hospitals between the percentages of Hispanics/Latinos and Blacks/African Americans is not statistically significant.

- When compared with their numbers in the U.S. civilian population, American Indians/Alaska Natives, as well as Blacks/African Americans, had higher rates of admission, overall, than did persons of other racial/ethnic groups (Table 3). This finding held true for males and females with several exceptions; the rates of admission for American Indian/Alaska Native males, White males, and Hispanic/Latino males did not differ significantly, nor did the rates for American Indian/Alaska Native females and White females.

- Similar to their under care counterparts, Asians/Pacific Islanders had the lowest rates of admission compared with persons of other racial/ethnic groups; this was true overall, and for both males and females. It also held for State/county mental hospitals and non-Federal general hospitals, overall (Table 3).

- Across organization types, Figure 4 shows that Blacks/African Americans comprised a greater proportion of persons admitted to VA

Table 3. Inpatient admissions—Number, percent distribution, and rate per 100,000 U.S. civilian population[1] of admissions, by race/ethnicity, gender, and type of inpatient psychiatric care program: United States, 1997

Race/ethnicity and gender	Inpatient psychiatric care program				
	Total, all inpatient programs[2]	State/county mental hospitals	Private psychiatric hospitals	Non-Federal general hospitals	VA medical centers
			Number		
Total	2,035,094	190,183	497,650	1,035,229	101,700
Male	1,097,127	115,246	260,189	516,258	94,858
Female	937,967	74,937	237,461	518,971	6,842
American Indian or Alaska Native	23,542	1,824	*	*	*
Male	12,786	*	*	*	*
Female	10,756	*	*	*	—
Asian or Pacific Islander	22,813	1,243	*	12,682	*
Male	7,322	*	*	*	*
Female	15,491	*	*	9,578	—
Black or African American	378,751	46,248	80,610	182,193	33,948
Male	225,748	28,462	38,201	104,436	30,867
Female	153,003	17,786	42,409	77,757	3,081
White	1,429,431	126,287	335,287	756,593	61,398
Male	753,146	75,751	180,527	367,146	57,802
Female	676,285	50,536	154,760	389,447	3,596
Hispanic or Latino	180,557	14,581	75,962	65,605	5,931
Male	98,125	9,969	37,931	31,093	5,766
Female	82,432	4,612	38,031	34,512	*
			Percent distribution		
Total	100.0	100.0	100.0	100.0	100.0
Male	53.9	60.6	52.3	49.9	93.3
Female	46.1	39.4	47.7	50.1	6.7
American Indian or Alaska Native	100.0	100.0	*	*	*
Male	54.3	*	*	*	*
Female	45.7	*	*	*	—
Asian or Pacific Islander	100.0	100.0	*	100.0	*
Male	32.1	*	*	*	*
Female	67.9	*	*	75.5	—
Black or African American	100.0	100.0	100.0	100.0	100.0
Male	59.6	61.5	47.4	57.3	90.9
Female	40.4	38.5	52.6	42.7	9.1
White	100.0	100.0	100.0	100.0	100.0
Male	52.7	60.0	53.8	48.5	94.1
Female	47.3	40.0	46.2	51.5	5.9
Hispanic or Latino	100.0	100.0	100.0	100.0	100.0
Male	54.3	68.4	49.9	47.4	97.2
Female	45.7	31.6	50.1	52.6	*

Table 3. Inpatient admissions—Number, percent distribution, and rate per 100,000 U.S. civilian population[1] of admissions, by race/ethnicity, gender, and type of inpatient psychiatric care program: United States, 1997 (continued)

Race/ethnicity and gender	Total, all inpatient programs[2]	State/county mental hospitals	Private psychiatric hospitals	Non-Federal general hospitals	VA medical centers
	Rate per 100,000 civilian population[1]				
Total	764.9	71.5	187.1	389.1	38.2
Male	847.5	89.0	201.0	398.8	73.3
Female	686.7	54.9	173.8	379.9	5.0
American Indian or Alaska Native	2,399.8	184.0	*	*	*
Male	1,326.0	*	*	*	*
Female	1,073.8	*	*	*	—
Asian or Pacific Islander	477.4	26.3	*	263.7	*
Male	161.9	*	*	*	*
Female	315.5	*	*	195.1	—
Black or African American	2,400.4	293.8	503.7	1,151.6	223.0
Male	1,497.7	188.8	253.4	692.8	204.8
Female	902.7	104.9	250.2	458.8	18.2
White	1,478.7	131.1	347.1	781.0	64.9
Male	798.2	80.3	191.3	389.1	61.3
Female	680.5	50.8	155.7	391.9	3.6
Hispanic or Latino	1,249.4	100.7	525.9	454.4	40.8
Male	674.8	68.6	260.8	213.8	39.6
Female	574.6	32.1	265.1	240.6	*

Source: *1997 Client/Patient Sample Survey.* Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.

[1] U.S. Bureau of the Census population estimates for May 1997 are used as denominators for rate computations.

[2] Multiservice mental health organizations are included in the total column, but are not detailed separately.

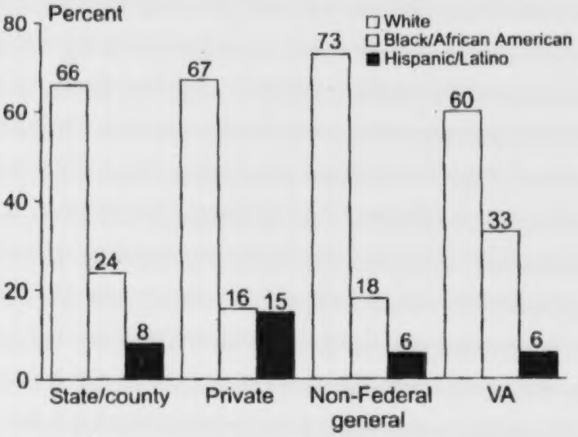
* Estimate is based on five or fewer sample cases or estimate has a relative standard error of 50% or higher. The estimate is not shown because it does not meet standards of reliability.

Note: Percentages may not add to 100% because of rounding.

medical centers (33 percent) than they did of those admitted to private psychiatric hospitals (16 percent) and non-Federal general hospitals (18 percent). A greater percentage of Whites were admitted to non-Federal general hospitals (73 percent) than to VA medical centers (60 percent). Private psychiatric hospitals admitted a greater percentage of Hispanics/Latinos (15 percent) than did non-Federal general hospitals and VA medical centers (6 percent each). Remaining observed differences are not statistically significant.

Age of Persons Under Care in Inpatient Programs

- Persons between the ages of 25 and 44 comprised the largest age group of persons under care overall, 49,532 (43 percent) in inpatient programs (Table 4). Twenty-seven percent of those in the under care caseload were ages 45 to 64; 14 percent, ages 65 and older; 11 percent, under age 18; and 6 percent, ages 18 to 24.



Source: 1997 CPSS, SAB/DSCSD/CMHS/SAMHSA/DHHS

Figure 4. Race/ethnicity of the admission population in inpatient programs of specialty mental health organizations, United States, 1997

- The 25 to 44 age group accounted for the largest percentage of persons under care in State/county mental hospitals and non-Federal general hospitals (47 percent each; Table 4). In private psychiatric hospitals, persons ages 25 to 44 accounted for one-third (34 percent), and children and youth under age 18 accounted for another one-third (34 percent), of those under care. This latter finding is in contrast to the relatively low proportions of children and youth under care in other organization types: 8 percent in non-Federal general hospitals and 5 percent in State/county mental hospitals. Given their nature, in VA medical centers, the under care population tended to be older; children and youth were not part of the under care caseload and persons ages 45 to 64 accounted for half of all residents.

- Although children and youth under age 18 were over-sampled within the *1997 CPSS*, there were still very few sample persons within these younger age groups in inpatient programs. Where comparisons can be made of the detailed younger age groups, youth ages 13 to 17 comprised the largest age group, overall (7 percent), and within State/county mental hospitals (4 percent), private psychiatric hospitals (20 percent), and non-Federal general hospitals (6 percent; Table 4). Private psychiatric hospitals had much greater percentages of children and youth under care in each age group—5 to 9, 10 to 12, and 13 to 17—compared with all other types of inpatient programs.

- Although overall, State/county mental hospitals had a higher under care rate than other inpatient programs, by age, this held only for persons in the 25 to 44 and 45 to 64 year age groups relative to their numbers in the U.S. civilian population (Table 4). Children and youth under age 18 had much higher under care rates in private psychiatric hospitals than in State/county mental hospitals and non-Federal general hospitals, holding true for each age group of children and youth—5 to 9, 10 to 12, and 13 to 17.

- For all inpatient care programs combined, children and youth under age 18 and persons ages 18 to 24 had lower under care rates per 100,000 civilian population than did persons in the older age groups (Table 4). Youth ages 13 to 17 had higher rates than children ages 5 to 9 and 10 to 12, overall, and within State/county mental hospitals, non-Federal general hospitals, and private psychiatric hospitals, with one exception; the observed difference among these youth and children ages 10 to 12 within private psychiatric hospitals is not statistically significant. Within State/county mental hospitals, elderly persons ages 65 and older had a significantly lower under care rate (19 per 100,000 population) than the 25 to 44 and 45 to 64 age groups (30 per 100,000 population each); such differences did not exist within other organizations.

Age of Persons Admitted to Inpatient Programs

- Similar to the finding for the under care population, the 25 to 44 age group comprised the largest proportion of inpatient admissions, overall, 963 thousand or 47 percent (Table 5). Only 14 percent of admissions were children and youth under 18 years of age, while 11 percent were ages 65 or older.

Table 4. Inpatient under care—Number, percent distribution, and rate per 100,000 U.S. civilian population[1] of persons under care, by age and type of inpatient psychiatric care program: United States, 1997

	Inpatient psychiatric care program				
Age	Total, all inpatient programs[2]	State/county mental hospitals	Private psychiatric hospitals	Non-Federal general hospitals	VA medical centers
			Number		
Total, all ages	116,224	54,015	17,456	28,951	6,657
Under 18	12,402	2,653	5,966	2,328	—
Under 5	*	—	*	*	—
5–9	2,007	201	1,083	343	—
10–12	2,015	428	1,270	317	—
13–17	8,330	2,024	3,585	1,646	—
18–24	6,912	2,828	954	1,875	37
25–44	49,532	25,238	5,951	13,533	2,117
45–64	31,470	16,767	3,077	6,109	3,333
65 and older	15,908	6,529	1,508	5,106	1,170
			Percent distribution		
Total, all ages	100.0	100.0	100.0	100.0	100.0
Under 18	10.7	4.9	34.2	8.0	—
Under 5	*	—	*	*	—
5–9	1.7	0.4	6.2	1.2	—
10–12	1.7	0.8	7.3	1.1	—
13–17	7.2	3.7	20.5	5.7	—
18–24	5.9	5.2	5.5	6.5	0.6
25–44	42.6	46.7	34.1	46.7	31.8
45–64	27.1	31.0	17.6	21.1	50.1
65 and older	13.7	12.1	8.6	17.6	17.6
			Rate per 100,000 civilian population[1]		
Total, all ages	43.7	20.3	6.6	10.9	2.5
Under 18	17.8	3.8	8.6	3.3	—
Under 5	*	—	*	*	—
5–9	10.2	1.0	5.5	1.7	—
10–12	17.6	3.7	11.1	2.8	—
13–17	43.4	10.5	18.7	8.6	—
18–24	28.3	11.6	3.9	7.7	0.2
25–44	59.8	30.5	7.2	16.3	2.6
45–64	57.1	30.4	5.6	11.1	6.0
65 and older	46.6	19.1	4.4	15.0	3.4

Source: *1997 Client/Patient Sample Survey.* Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.

[1] U.S. Bureau of the Census population estimates for May 1997 are used as denominators for rate computations.

[2] Multiservice mental health organizations are included in the total column, but are not detailed separately.

* Estimate is based on five or fewer sample cases or estimate has a relative standard error of 50% or higher. The estimate is not shown because it does not meet standards of reliability.

Note: Percentages may not add to 100% because of rounding.

Table 5. Inpatient admissions—Number, percent distribution, and rate per 100,000 U.S. civilian population[1] of admissions, by age and type of inpatient psychiatric care program: United States, 1997

	Inpatient psychiatric care program				
Age	**Total, all inpatient programs[2]**	**State/county mental hospitals**	**Private psychiatric hospitals**	**Non-Federal general hospitals**	**VA medical centers**
			Number		
Total, all ages	2,035,094	190,183	497,650	1,035,229	101,700
Under 18	286,452	19,924	149,405	86,662	—
Under 5	*	—	*	*	—
5–9	33,331	1,249	18,245	9,287	—
10–12	53,715	2,950	28,533	20,106	—
13–17	193,646	15,725	101,351	52,785	—
18–24	177,611	17,478	37,557	91,070	*
25–44	963,224	108,387	194,724	520,130	39,371
45–64	390,624	37,857	74,901	199,434	52,614
65 and older	217,183	6,537	41,063	137,933	9,510
			Percent distribution		
Total, all ages	100.0	100.0	100.0	100.0	100.0
Under 18	14.1	10.5	30.0	8.4	—
Under 5	*	—	*	*	—
5–9	1.6	0.7	3.7	0.9	—
10–12	2.6	1.6	5.7	1.9	—
13–17	9.5	8.3	20.4	5.1	—
18–24	8.7	9.2	7.5	8.8	*
25–44	47.3	57.0	39.1	50.2	38.7
45–64	19.2	19.9	15.1	19.3	51.7
65 and older	10.7	3.4	8.3	13.3	9.4
			Rate per 100,000 civilian population[1]		
Total, all ages	764.9	71.5	187.1	389.1	38.2
Under 18	412.1	28.7	215.0	124.7	—
Under 5	30.1	—	*	*	—
5–9	169.1	6.3	92.6	47.1	—
10–12	468.4	25.7	248.8	175.3	—
13–17	1,008.7	81.9	527.9	275.0	—
18–24	726.4	71.5	153.6	372.4	*
25–44	1,163.1	130.9	235.1	628.0	47.5
45–64	708.7	68.7	135.9	361.8	95.5
65 and older	635.9	19.1	120.2	403.9	27.8

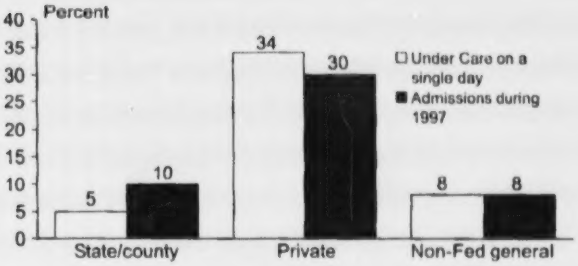
Source: *1997 Client/Patient Sample Survey.* Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.

[1] U.S. Bureau of the Census population estimates for May 1997 are used as denominators for rate computations.

[2] Multiservice mental health organizations are included in the total column, but are not detailed separately.

* Estimate is based on five or fewer sample cases or estimate has a relative standard error of 50% or higher. The estimate is not shown because it does not meet standards of reliability.

Note: Percentages may not add to 100% because of rounding.



Source: 1997 CPSS, SAB/DSCSD/CMHS/SAMHSA/DHHS

Figure 5. Children and youth under age 18 as a percentage of the under care and admission populations, inpatient programs of specialty mental health organizations, United States, 1997

- As was true for the under care population, private psychiatric hospitals admitted a higher percentage of children and youth under age 18 to their inpatient programs than did other types of organizations (Figure 5 and Table 5). Children and youth under age 18 comprised 30 percent of the admission population in private psychiatric hospitals, compared with only 10 percent in State/county mental hospitals and 8 percent in non-Federal general hospitals.

- Comparisons among the detailed age groupings for children and youth under age 18 reveal that the largest concentration of admissions among this young population was found for youth ages 13 to 17, overall, and within State/county mental hospitals and private psychiatric hospitals (Table 5). Similar to the under care population, private psychiatric hospitals had the largest proportion of children admitted in the 5 to 9, 10 to 12, and 13 to 17 age groups compared with all other types of organizations, and also the highest rates under care per 100,000 population for the 5 to 9 and 13 to 17 age groups.

- Although the overall number of admissions was much larger than the number of persons under care, approximately the same numbers of elderly persons were admitted to State/county mental hospitals as were under care in these programs (about 6.5 thousand each; Tables 4 and 5). Hence, elderly persons represented a much smaller percentage of admissions than of persons under care (3 vs. 12 percent). In VA medical centers, no significant difference existed between the proportion of persons ages 65 or older in the under care and admission caseloads; similar to the under care caseload, persons ages 45 to 64 comprised more than half of VA admissions (Table 5).

- The rates for persons admitted to inpatient care were greater than the rates for persons under care in inpatient care programs for all age groups within each organizational setting with one exception. Because equal numbers of elderly persons were admitted and under care in State/county mental hospitals, admission and under care rates for elderly persons were also equal (19 per 100,000 population each; Tables 4 and 5). As noted, the elderly under care rate within State/county mental hospitals was lower than rates for the 25 to 44 and 45 to 64 year groups. This pattern was also very pronounced among admissions to State/county mental hospitals; the rate for the 25 to 44 year group was seven times the admission rate for elderly persons (131 vs. 19 per 100,000 population), and the admission rates for the 13 to 17, 18 to 24, and 45 to 64 year groups were each around 4 times higher than the elderly admission rate (Table 5).

- Overall, for all inpatient program types combined, persons ages 25 to 44 and 13 to 17 had higher rates of admission than other age groups, each more than 1,000 per 100,000 population, while children ages 5 to 9 had the lowest admission rate (169 per 100,000 population; Table 5). Within State/county mental hospitals, non-Federal general hospitals, and VA medical centers, persons in the 25 to 44 age group had the highest rates of admission of any age group, whereas within private psychiatric hospitals, youth ages 13 to 17 had the highest admission rate. Of the under age 18 population overall, youth ages 13 to 17 had higher rates than children ages 5 to 9 and 10 to 12; this finding also held true within State/county mental hospitals and private psychiatric hospitals.

- Unlike the under care population, where State/county mental hospitals had the highest rates for persons in the 25 to 44 and 45 to 64 age groups, admission rates were highest in non-Federal general hospitals for the 18 to

Table 6. Inpatient under care—Number and percent of total persons under care, by selected principal diagnoses and type of inpatient psychiatric care program: United States, 1997

Selected principal diagnoses	Inpatient psychiatric care program: Total, all inpatient programs[1]	State/county mental hospitals	Private psychiatric hospitals	Non-Federal general hospitals	VA medical centers
	Number				
Alcohol-related disorders	3,614	852	723	1,177	843
Drug-related disorders	3,368	1,103	866	830	478
Affective disorders	29,430	6,930	7,169	11,385	1,371
Schizophrenia	52,899	34,357	3,289	8,583	2,666
Personality disorders	1,157	671	251	190	*
Adjustment disorders	2,441	433	211	700	*
Organic disorders	7,202	4,214	448	2,004	489
	Percent				
Alcohol-related disorders	3.1	1.6	4.1	4.1	12.7
Drug-related disorders	2.9	2.0	5.0	2.9	7.2
Affective disorders	25.3	12.8	41.1	39.3	20.6
Schizophrenia	45.5	63.6	18.8	29.6	40.0
Personality disorders	1.0	1.2	1.4	0.7	*
Adjustment disorders	2.1	0.8	1.2	2.4	*
Organic disorders	6.2	7.8	2.6	6.9	7.3

Source: *1997 Client/Patient Sample Survey.* Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.

[1] Multiservice mental health organizations are included in the total column, but are not detailed separately.

* Estimate is based on five or fewer sample cases or estimate has a relative standard error of 50% or higher. The estimate is not shown because it does not meet standards of reliability.

Note: Percentages do not add to 100% because only selected diagnoses are shown.

24, 25 to 44, 45 to 64, and 65 and older age groups (Table 5).

Principal Psychiatric Diagnosis[2] of Persons Under Care in Inpatient Programs

- Table 6 presents the frequency of selected principal psychiatric diagnoses among the under care population in inpatient programs. Overall, schizophrenia was the most frequently reported diagnostic grouping (46 percent), followed by affective disorders (25 percent).
- Considerable differences occurred across organization types in the relative frequency of these two major diagnostic groupings. In private psychiatric hospitals, affective disorders accounted for the largest percentage of persons under care (41 percent), followed by schizophrenia (19 percent; Table 6). In State/county mental hospitals and VA medical centers, schizophrenia was the predominant diagnostic grouping (64 and 40 percent, respectively), while the percentage of persons under care diagnosed with affective disorders was lower in State/county mental hospitals (13 percent) than in any other type of inpatient program. Note that differences observed between the proportion of persons under care diagnosed with schizophrenia and affective disorders in non-Federal general hospitals (30 and 39 percent, respectively) are not statistically significant.

Table 7. Inpatient admissions—Number and percent of total admissions, by selected principal diagnoses and type of inpatient psychiatric care program: United States, 1997

Selected principal diagnoses	Inpatient psychiatric care program Total, all inpatient programs[1]	State/county mental hospitals	Private psychiatric hospitals	Non-Federal general hospitals	VA medical centers
			Number		
Alcohol-related disorders	150,675	20,437	43,166	53,998	20,648
Drug-related disorders	88,175	14,581	29,519	22,476	12,841
Affective disorders	802,913	44,883	237,094	454,763	17,110
Schizophrenia	407,627	54,919	63,229	223,603	24,870
Personality disorders	37,778	4,539	8,619	16,211	*
Adjustment disorders	92,278	12,575	10,329	45,344	3,011
Organic disorders	78,151	5,038	8,975	48,408	2,308
			Percent		
Alcohol-related disorders	7.4	10.7	8.7	5.2	20.3
Drug-related disorders	4.3	7.7	5.9	2.2	12.6
Affective disorders	39.5	23.6	47.6	43.9	16.8
Schizophrenia	20.0	28.9	12.7	21.6	24.5
Personality disorders	1.9	2.4	1.7	1.6	*
Adjustment disorders	4.5	6.6	2.1	4.4	3.0
Organic disorders	3.8	2.6	1.8	4.7	2.3

Source: *1997 Client/Patient Sample Survey.* Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.

[1] Multiservice mental health organizations are included in the total column, but are not detailed separately.

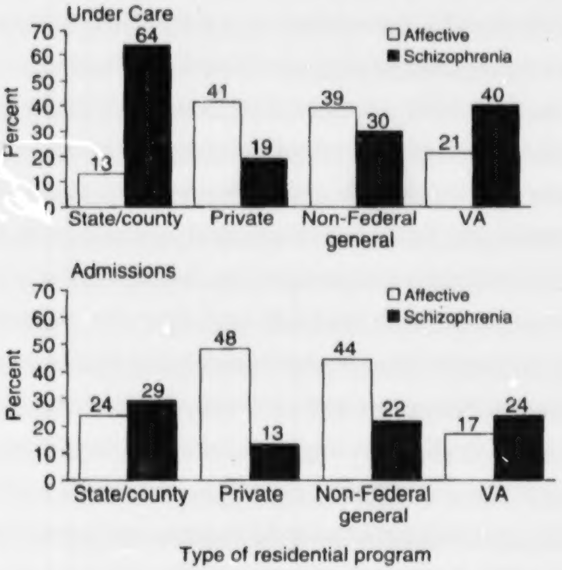
* Estimate is based on five or fewer sample cases or estimate has a relative standard error of 50% or higher. The estimate is not shown because it does not meet standards of reliability.

Note: Percentages do not add to 100% because only selected diagnoses are shown.

- The percentage of persons under care with a diagnosis of alcohol-related disorders tended to be larger in VA medical centers, but the only statistically significant difference was between the VA medical centers and State/county mental hospitals (13 vs. 2 percent; Table 6). This finding was also true for persons under care with a diagnosis of drug-related disorders; 7 percent in VA medical centers versus 2 percent in State/county mental hospitals.

Principal Psychiatric Diagnosis[2] of Persons Admitted to Inpatient Programs

- Overall, the most frequently occurring diagnostic grouping among admissions to inpatient psychiatric programs was affective disorders (40 percent), followed by schizophrenia (20 percent; Table 7), a reversal compared with the under care population.
- Similar to the under care population, persons diagnosed with affective disorders were predominant among admissions to private psychiatric hospitals (48 percent). Persons with diagnoses of schizophrenia and affective disorders comprised the largest proportions of the admission population in State/county mental hospitals (29 and 24 percent, respectively; Table 7). In non-Federal general hospitals, differences within the admission population were more striking than within the under care population; affective disorders ranked first (44 percent), followed by schizo-



Source: 1997 CPSS, SAB/DSCSD/CMHS/SAMHSA/DHHS

Figure 6. Comparison of the percentages of the under care and admission populations diagnosed with affective disorders or schizophrenia in inpatient programs of specialty mental health organizations, United States, 1997

phrenia (22 percent), among admissions to this inpatient setting.

- In VA medical centers, the proportion of admissions with a diagnosis of alcohol-related disorders (20 percent) was considerably greater than in each of the remaining organization types, where the percentages of admissions with alcohol-related disorders ranged from 5 to 11 percent (Table 7).

- A comparison of the admission and under care populations in inpatient programs clearly shows that, in State/county mental hospitals and VA medical centers, persons diagnosed with schizophrenia comprised much higher percentages of the under care populations than of the admission populations (Figure 6 and Tables 6 and 7). In State/county mental hospitals, the percentage of persons diagnosed with schizophrenia was 64 percent for the under care population and only 29 percent among admissions; in VA medical centers, 40 percent of persons under care were diagnosed with schizophrenia compared with 24 percent of admissions.

- By contrast, in State/county mental hospitals, a much greater percentage of persons admitted than persons under care had a diagnosis of affective disorders (24 vs.13 percent; Figure 6).

Residential Care Programs

An estimated 83 thousand persons were under care in residential care programs of specialty mental health organizations in 1997 and more than twice as many, an estimated 171 thousand persons, were admitted to these settings in that year (Table 1).

Because of the relatively small sizes of the residential care programs in State/county mental hospitals, private psychiatric hospitals, non-Federal general hospitals, VA medical centers, and multiservice mental health organizations, the *1997 CPSS* was not designed to provide separate estimates for residential care in each of these organizations. Hence, the characteristics of their residents are not detailed separately in the text that follows or in Tables 8 to 13, but are summed together under the general heading *all other organizations*. Only residential treatment centers (RTCs) for emotionally disturbed children are analyzed separately from other residential programs.

Gender, Race, and Ethnicity of Persons Under Care in Residential Programs

- Overall, among the estimated 82,916 persons under care in residential care programs during 1997, most were males, accounting for 64 percent of the total; females comprised 36 percent of the total (Table 8). This finding held within RTCs for emotionally disturbed children as well as for the all other organizations grouping.

- Where comparisons can be made by gender within each racial/ethnic group, data show that the proportion of males was greater than the proportion of females among Blacks/African Americans and Whites, overall (Table 8). Within RTCs for emotionally disturbed children, males predominated for Blacks/African

Table 8. Residential care under care—Number, percent distribution, and rate per 100,000 U.S. civilian population[1] of persons under care, by race/ethnicity, gender, and type of residential care program: United States, 1997

Race/ethnicity and gender	Residential care program		
	Total, all residential care programs	RTCs for emotionally disturbed children	All other organizations[2]
		Number	
Total	82,916	27,642	55,274
Male	52,921	19,623	33,298
Female	29,995	8,019	21,976
American Indian or Alaska Native	1,138	836	*
Male	798	529	*
Female	*	*	*
Asian or Pacific Islander	731	*	608
Male	*	*	*
Female	*	*	*
Black or African American	21,553	8,570	12,983
Male	13,838	5,874	7,964
Female	7,715	2,696	5,019
White	51,696	15,197	36,499
Male	33,451	10,969	22,482
Female	18,245	4,228	14,017
Hispanic or Latino	7,798	2,916	4,882
Male	4,472	2,163	2,309
Female	3,326	753	2,573
		Percent distribution	
Total	100.0	100.0	100.0
Male	63.8	71.0	60.2
Female	36.2	29.0	39.8
American Indian or Alaska Native	100.0	100.0	*
Male	70.1	63.3	*
Female	*	*	*
Asian or Pacific Islander	100.0	*	100.0
Male	*	*	*
Female	*	*	*
Black or African American	100.0	100.0	100.0
Male	64.2	68.5	61.3
Female	35.8	31.5	38.7
White	100.0	100.0	100.0
Male	64.7	72.2	61.6
Female	35.3	27.8	38.4
Hispanic or Latino	100.0	100.0	100.0
Male	57.3	74.2	47.3
Female	42.7	25.8	52.7

Table 8. Residential care under care—Number, percent distribution, and rate per 100,000 U.S. civilian population[1] of persons under care, by race/ethnicity, gender, and type of residential care program: United States, 1997 (continued)

Race/ethnicity and gender	Residential care program		
	Total, all residential care programs	**RTCs for emotionally disturbed children**	**All other organizations[2]**
	Rate per 100,000 civilian population[1]		
Total	31.2	10.4	20.8
Male	40.9	15.2	25.7
Female	22.0	5.9	16.1
American Indian or Alaska Native	116.7	85.5	*
Male	82.8	54.9	*
Female	*	*	*
Asian or Pacific Islander	15.5	*	12.9
Male	*	*	*
Female	*	*	*
Black or African American	137.3	54.9	82.4
Male	91.8	39.0	52.8
Female	45.5	15.9	29.6
White	53.8	15.9	37.9
Male	35.5	11.6	23.8
Female	18.4	4.3	14.1
Hispanic or Latino	53.9	20.1	33.8
Male	30.8	14.9	15.9
Female	23.2	5.2	17.9

Source: *1997 Client/Patient Sample Survey.* Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.

[1] U.S. Bureau of the Census population estimates for May 1997 are used as denominators for rate computations.

[2] Includes the residential care programs of State and county mental hospitals, private psychiatric hospitals, non-Federal general hospitals, VA medical centers, and multiservice mental health organizations.

* Estimate is based on five or fewer sample cases or estimate has a relative standard error of 50% or higher. The estimate is not shown because it does not meet standards of reliability.

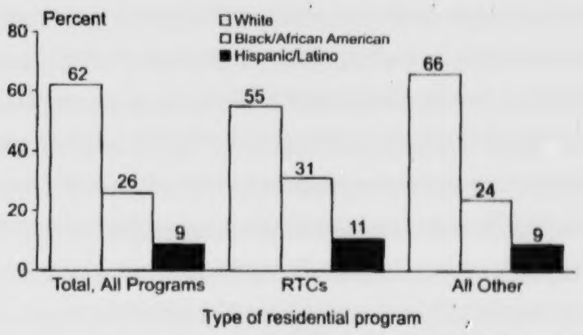
Note: Percentages may not add to 100% because of rounding.

Americans, Whites, and Hispanics/Latinos; within the other organizations group, this held among Whites only (other differences are not statistically significant for this setting).

- As Figure 7 shows, Whites represented the majority of persons under care in residential care programs in 1997. Blacks/African Americans comprised the next largest proportion, followed by Hispanics/Latinos. This finding is similar to that found overall for inpatient care programs.

- When compared with their numbers in the U.S. civilian population, males had higher under care rates than females overall (Table 8). Among Blacks/African Americans and Whites, the rates for males were twice the rates for females. Within RTCs for emotionally disturbed children, males also had higher rates than females among Hispanics/Latinos in addition to Blacks/African Americans and Whites.

- Among Whites, males and females in RTCs for emotionally disturbed children had lower



Source: 1997 CPSS, SAB/DSCSD/CMHS/SAMHSA/DHHS

Figure 7. Race/ethnicity of the under care population in residential programs of specialty mental health organizations, United States, 1997

under care rates per 100,000 civilian population than did males and females in the other residential organizations group; among Hispanics/Latinos, this was also true for females (Table 8).

Gender, Race, and Ethnicity of Persons Admitted to Residential Programs

- Of the estimated 171,407 persons admitted to residential care programs, most were males (63 percent); females accounted for 37 percent of total persons admitted (Table 9). Overall, these proportions were similar to those found for males and females under care in residential care programs (Table 8). Similar proportions were found among admissions to each of the two groupings of residential programs (RTCs and other residential organizations).

- Males comprised the majority of Blacks/African Americans and Whites admitted to residential care overall, and the majority of Whites in each of the two residential care settings (Table 9). Although it appears that there were greater proportions of Hispanic/Latino males than females, caution must be used when comparing these data because the differences are not statistically significant.

- Overall, the proportions that males and females comprised of the admission population in residential care programs did not differ significantly from the proportions that they represented in the under care population for this program setting (Tables 8 and 9). This finding also held true within each racial/ethnic group.

- Where comparisons can be made by gender within racial/ethnic groups, the data show that a greater percentage of White males were admitted to residential care programs than to inpatient care programs (64 vs. 53 percent; Tables 3 and 9). Conversely, a greater percentage of White females were admitted to inpatient than to residential care programs (47 vs. 36 percent).

- Figure 8 shows that, similar to the finding for the residential under care population, Whites accounted for the majority of persons admitted to residential care programs. A larger proportion of Whites were admitted to the all other organizations group (73 percent) than to RTCs for emotionally disturbed children (55 percent).

- Overall, when compared with their numbers in the U.S. civilian population, the rate of admission to residential care programs was greater for males than females (84 vs. 46 per 100,000 population; Table 9). Note, however, that this difference between males and females does not hold statistically for either RTCs for emotionally disturbed children or the other residential group when considered separately.

- The rates for persons admitted were greater than the rates for persons under care in residential care programs overall, as well as for males and females (Tables 8 and 9). This held true within the all other residential organizations group, but not within RTCs for emotionally disturbed children; in this latter setting, only the admission rate for females exceeded the female under care rate.

- Where comparisons can be made by race/ethnicity, it is seen that the rates of admission to residential care programs were lower for Asians/Pacific Islanders than for Blacks/African Americans, Whites, and Hispanics/Latinos, overall. Among males overall, Asians/Pacific Islanders had the lowest admission rate of any racial/ethnic group (Table 9).

Table 9. Residential care admissions—Number, percent distribution, and rate per 100,000 U.S. civilian population[1] of admissions, by race/ethnicity, gender, and type of residential care program: United States, 1997

Race/ethnicity and gender	Residential care program		
	Total, all residential care programs	RTCs for emotionally disturbed children	All other organizations[2]
		Number	
Total	171,407	43,365	128,042
Male	108,674	27,819	80,855
Female	62,733	15,546	47,187
American Indian or Alaska Native	*	*	*
Male	831	*	*
Female	*	*	—
Asian or Pacific Islander	2,052	*	1,481
Male	707	*	*
Female	*	*	*
Black or African American	33,723	12,406	21,317
Male	20,845	7,208	13,637
Female	12,878	5,198	7,680
White	117,571	23,703	93,868
Male	75,477	15,984	59,493
Female	42,094	7,719	34,375
Hispanic or Latino	16,377	5,377	11,000
Male	10,814	3,748	7,066
Female	5,563	1,629	3,934
		Percent distribution	
Total	100.0	100.0	100.0
Male	63.4	64.2	63.1
Female	36.6	35.8	36.9
American Indian or Alaska Native	*	*	*
Male	49.3	*	*
Female	*	*	—
Asian or Pacific Islander	100.0	*	100.0
Male	34.5	*	*
Female	*	*	*
Black or African American	100.0	100.0	100.0
Male	61.8	58.1	64.0
Female	38.2	41.9	36.0
White	100.0	100.0	100.0
Male	64.2	67.4	63.4
Female	35.8	32.6	36.6
Hispanic or Latino	100.0	100.0	100.0
Male	66.0	69.7	64.2
Female	34.0	30.3	35.8

Table 9. Residential care admissions—Number, percent distribution, and rate per 100,000 U.S. civilian population[1] of admissions, by race/ethnicity, gender, and type of residential care program: United States, 1997 (continued)

	Residential care program		
Race/ethnicity and gender	**Total, all residential care programs**	**RTCs for emotionally disturbed children**	**All other organizations[2]**
	Rate per 100,000 civilian population[1]		
Total	64.4	16.3	48.1
Male	83.9	21.5	62.5
Female	45.9	11.4	34.5
American Indian or Alaska Native	*	*	*
Male	86.2	*	*
Female	*	*	—
Asian or Pacific Islander	43.0	*	30.7
Male	15.6	*	*
Female	*	*	*
Black or African American	214.3	78.5	135.8
Male	138.3	47.8	90.5
Female	76.0	30.7	45.3
White	122.3	24.7	97.6
Male	80.0	16.9	63.1
Female	42.4	7.8	34.6
Hispanic or Latino	113.1	37.1	76.0
Male	74.4	25.8	48.6
Female	38.8	11.4	27.4

Source: *1997 Client/Patient Sample Survey*. Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.

[1] U.S. Bureau of the Census population estimates for May 1997 are used as denominators for rate computations.

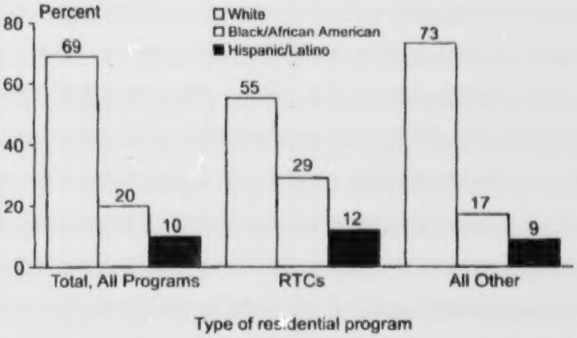
[2] Includes the residential care programs of State and county mental hospitals, private psychiatric hospitals, non-Federal general hospitals, VA medical centers, and multiservice mental health organizations.

* Estimate is based on five or fewer sample cases or estimate has a relative standard error of 50% or higher. The estimate is not shown because it does not meet standards of reliability.

Note: Percentages may not add to 100% because of rounding.

Additional comparisons by race/ethnicity reveal that Blacks/African Americans were also admitted to residential care programs at a greater rate than Whites and Hispanics/Latinos, both overall and among females (Table 9). The only statistically significant difference in the rate of admission for males and females is found among Whites, for whom the rate for males exceeded that for females.

- Within RTCs for emotionally disturbed children, the rates of admission for Blacks/African Americans were greater than those for Whites, both overall and for males and females; the rate for Black/African American females was also greater than the rate for Hispanic/Latino females (Table 9). In the other residential organizations grouping, Asians/Pacific Islanders were admitted at a much lower rate than Blacks/African Americans and Whites (31, 136, and 98 per 100,000 population, respectively).
- Comparisons with the under care population in residential care programs reveal that



Source: 1997 CPSS, SAB/DSCSD/CMHS/SAMHSA/DHHS

Figure 8. Race/ethnicity of the admission population in residential programs of specialty mental health organizations, United States, 1997

Whites had higher admission than under care rates, both overall and for males and females; this held true for the other residential organizations group, but not for RTCs (Tables 8 and 9). Admission rates were also higher than under care rates for Hispanics/Latinos, overall and among males for all residential program types combined.

- When comparing residential and inpatient admission populations, it can be seen that persons admitted to inpatient care programs had substantially higher rates than persons admitted to residential care programs; this finding held for all racial/ethnic groups and for males and females within those racial/ethnic groups where comparisons can be made (Tables 3 and 9).

Age of Persons Under Care in Residential Programs

- Overall, children and youth under age 18 and persons ages 25 to 44 accounted for the largest percentages of persons under care in residential care programs (40 and 30 percent, respectively; Table 10). As could be expected, within RTCs for emotionally disturbed children, the under age 18 population predominated, accounting for 95 percent of all persons under care; youth ages 13 to 17 comprised the largest subgroup of those under 18, accounting for 65 percent of total persons under care in this setting. For the all other organizations group, persons ages 25 to 44 accounted for the largest proportion of persons under care (45 percent), followed by those ages 45 to 64 (30 percent). Clearly, the two subgroups of residential programs served very different populations with respect to age.

- When inpatient and residential under care caseloads are compared, overall for all organization types combined, results show that, as could be expected, children and youth under age 18 made up a considerably greater proportion of the residential caseload than of the inpatient caseload (40 vs. 11 percent; Tables 4 and 10). Similarly, the under care rates for children and youth under age 18 were larger in residential than in inpatient care programs, while the under care rates for persons in the 25 to 44, 45 to 64, and 65 and older age groups were larger in inpatient than in residential care programs.

- When looking specifically at the detailed age groups for children and youth under age 18, it can be seen that overall, and for both categories of residential programs, the under care rates were progressively greater from the youngest to the oldest age group where comparisons can be made. Youth ages 13 to 17 had a particularly high under care rate (122 per 100,000 population), twice the size of the next largest under care rate, found for children ages 10 to 12 (58 per 100,000 population).

- Where comparisons can be made by age across residential care settings, the data show that the under care rates for each of the children and youth age groups under age 18 were greater in RTCs for emotionally disturbed children than in the other residential organizations group; conversely, the under care rates for persons ages 18 to 24 and 25 to 44 were greater in other residential care organizations than in RTCs for emotionally disturbed children.

Table 10. Residential care under care—Number, percent distribution, and rate per 100,000 U.S. civilian population[1] of persons under care, by age and type of residential care program: United States, 1997

Age	Residential care program Total, all residential care programs	 RTCs for emotionally disturbed children	 All other organizations[2]
		Number	
Total, all ages	82,916	27,642	55,274
Under 18	32,968	26,322	6,646
Under 5	*	*	*
5–9	2,812	2,512	300
10–12	6,591	5,654	937
13–17	23,455	18,062	5,393
18–24	5,446	*	4,576
25–44	25,267	*	24,910
45–64	16,965	*	16,872
65 and older	3,270	—	3,270
		Percent distribution	
Total, all ages	100.0	100.0	100.0
Under 18	39.8	95.2	12.0
Under 5	*	*	*
5–9	3.4	9.1	0.5
10–12	7.9	20.5	1.7
13–17	28.3	65.3	9.8
18–24	6.6	*	8.3
25–44	30.5	*	45.1
45–64	20.5	*	30.5
65 and older	2.7	—	4.1
		Rate per 100,000 civilian population[1]	
Total, all ages	31.2	10.4	20.8
Under 18	47.4	37.9	9.6
Under 5	*	*	*
5–9	14.3	12.7	1.5
10–12	57.5	49.3	8.2
13–17	122.2	94.1	28.1
18–24	22.3	*	18.7
25–44	30.5	*	30.1
45–64	30.8	*	30.6
65 and older	6.6	—	6.6

Source: *1997 Client/Patient Sample Survey.* Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.

[1] U.S. Bureau of the Census population estimates for May 1997 are used as denominators for rate computations.

[2] Includes the residential care programs of State and county mental hospitals, private psychiatric hospitals, non-Federal general hospitals, VA medical centers, and multiservice mental health organizations.

* Estimate is based on five or fewer sample cases or estimate has a relative standard error of 50% or higher. The estimate is not shown because it does not meet standards of reliability.

Note: Percentages may not add to 100% because of rounding.

Age of Persons Admitted to Residential Programs

- Similar to the residential under care population, admissions to residential care programs were concentrated largely in the under 18 and 25 to 44 age groups (38 and 36 percent, respectively; Table 11). Among the under age 18 admissions population, most children and youth were ages 13 to 17.

- In RTCs for emotionally disturbed children, 97 percent of admissions were under the age of 18, with most ages 13 to 17 (71 percent of total admissions; Table 11). As with the under care population, the proportion of children and youth under age 18 was significantly higher in RTCs than in the all other organizations grouping (19 percent). Persons in the 25 to 44 age group comprised the largest percentage of persons admitted to the all other organizations group (48 percent).

- Within residential programs in the other organizations group, persons ages 45 to 64 accounted for only 20 percent of admissions, but 30 percent of the under care population; hence, admissions tended to be a somewhat younger group than persons under care (Tables 10 and 11).

- A comparison of the admission populations in residential and inpatient care programs reveals that the percentage of children and youth under age 18 was almost three times greater in residential than in inpatient care programs (38 vs.14 percent; Tables 5 and 11). This finding also held for youth ages 13 to 17, who comprised 29 percent of admissions to residential care programs compared with 10 percent of admissions to inpatient care programs.

- Among all persons admitted to residential care programs, youth ages 13 to 17 were admitted at the greatest rate when compared with their numbers in the population (259 per 100,000 population); this finding held true within RTCs for emotionally disturbed children (Table 11).

- Comparisons between the admission and under care populations in residential care programs reveal that, overall, the rates of admission were somewhat higher than the under care rates for most age groups (Tables 10 and 11), but they did not differ nearly as much as for inpatient programs.

Principal Psychiatric Diagnosis[2] of Persons Under Care in Residential Programs

- More than one-third of all persons under care in residential care programs had a diagnosis of schizophrenia (35 percent; Table 12). Those diagnosed with affective disorders and attention/conduct disorders accounted for the next largest concentrations of persons in the under care population of residential care programs (18 and 16 percent, respectively).

- In RTCs for emotionally disturbed children, persons diagnosed with attention/conduct disorders predominated (39 percent), followed by persons diagnosed with affective disorders (17 percent; Table 12 and Figure 9). By comparison, one-half of all persons under care in the all other organizations group had a diagnosis of schizophrenia. The second largest concentration of persons under care in these settings had diagnoses of affective disorders (18 percent). Just as with age, it is clear that the two subgroups of residential programs served very different populations with respect to diagnosis.

- A look at the proportions of selected principal diagnoses for the under care population compared with the under care population in inpatient care programs reveals significant differences. Residents with diagnoses of affective disorders were much more frequently found in inpatient than in residential care programs (25 vs. 18 percent; Tables 6 and 12). In addition, the percentage of residents in inpatient care programs with diagnoses of organic disorders (6 percent) was much greater than the percentage for their counterparts in residential care programs (1 percent).

Table 11. Residential care admissions—Number, percent distribution, and rate per 100,000 U.S. civilian population[1] of admissions, by age and type of residential care program: United States, 1997

	Residential care program		
Age	Total, all residential care programs	RTCs for emotionally disturbed children	All other organizations[2]
		Number	
Total, all ages	171,407	43,365	128,042
Under 18	65,949	42,015	23,934
Under 5	*	*	—
5–9	7,781	4,697	3,084
10–12	8,245	6,345	1,900
13–17	49,795	30,845	18,950
18–24	17,042	*	16,117
25–44	61,294	*	60,869
45–64	25,067	—	25,067
65 and older	*	—	*
		Percent distribution	
Total, all ages	100.0	100.0	100.0
Under 18	38.5	96.9	18.7
Under 5	*	*	—
5–9	4.5	10.8	2.4
10–12	4.8	14.6	1.5
13–17	29.1	71.1	14.8
18–24	9.9	*	12.6
25–44	35.8	*	47.5
45–64	14.6	—	19.6
65 and older	*	—	*
		Rate per 100,000 civilian population[1]	
Total, all ages	64.4	16.3	48.1
Under 18	94.9	60.4	34.4
Under 5	*	*	—
5–9	39.5	23.8	15.6
10–12	71.9	55.3	16.6
13–17	259.4	160.7	98.7
18–24	69.7	*	65.9
25–44	74.0	*	73.5
45–64	45.5	—	45.5
65 and older	*	—	*

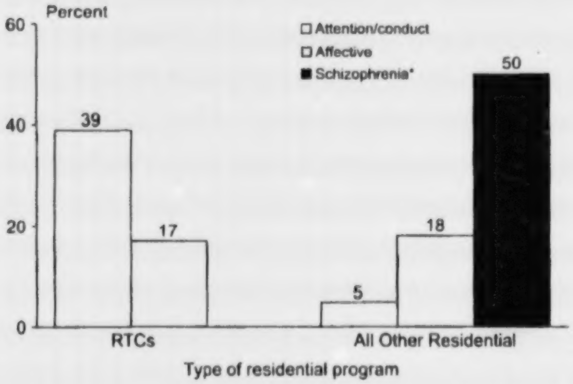
Source: *1997 Client/Patient Sample Survey.* Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.

[1] U.S. Bureau of the Census population estimates for May 1997 are used as denominators for rate computations.

[2] Includes the residential care programs of State and county mental hospitals, private psychiatric hospitals, non-Federal general hospitals, VA medical centers, and multiservice mental health organizations.

* Estimate is based on five or fewer sample cases or estimate has a relative standard error of 50% or higher. The estimate is not shown because it does not meet standards of reliability.

Note: Percentages may not add to 100% because of rounding.



Source: 1997 CPSS, SAB/DSCSD/CMHS/SAMHSA/DHHS
**Note: Estimate is not reliable and is not shown for RTC's*

Figure 9. Comparison of the percentages of the under care populations with specific diagnoses in RTCs and other residential programs, United States, 1997

Principal Psychiatric Diagnosis[2] of Persons Admitted to Residential Programs

- Overall, a diagnosis of schizophrenia was twice as likely to be found among persons under care than among persons admitted to residential care programs (35 vs.18 percent; Tables 12 and 13). This finding also held true for the other organizations group; 50 percent of the under care population versus 23 percent of admissions. While there appear to be many additional marked differences between the overall diagnostic distribution of residential care program admissions and the under care population in these programs, they are not statistically significant.

- Within all residential care programs combined, affective disorders represented a larger percentage of the admission diagnoses than any other diagnostic grouping, with the exception of schizophrenia (where the difference noted is not statistically significant; Table 13). Within RTCs for emotionally disturbed children, most admissions had a diagnosis of attention/conduct disorders, accounting for one-third (34 percent) of all admissions to this setting.

- Overall, admissions to residential care programs were significantly less likely to have diagnoses of affective disorders compared with admissions to inpatient care programs (24 vs. 40 percent; Tables 7 and 13).

Less Than 24-Hour Care Programs

Unlike previous national client/patient sample surveys, which collected and reported data separately for the outpatient and partial care programs of specialty mental health organizations, *1997 CPSS* combined these two program types into the single category "less than 24-hour (and not overnight)." This category is consistent with that used in Chapter 14.

Less than 24-hour care services accounted for a much larger proportion of the total number of persons under care in organized mental health settings than in either inpatient or residential care programs (Table 1). An estimated 2.2 million persons were under care and another 3.3 million persons were admitted to this program setting during 1997. The bulk of less than 24-hour care service provision occurred within multiservice mental health organizations, which accounted for 885 thousand persons under care (41 percent) and 1.4 million persons admitted (41 percent). The second largest concentration of persons under care was found within freestanding outpatient clinics/partial care organizations (640 thousand or 30 percent), followed by non-Federal general hospitals (301 thousand or 14 percent), and VA medical centers (150 thousand or 7 percent). RTCs for emotionally disturbed children, private psychiatric hospitals, and State/county mental hospitals had the smallest numbers of persons under care in less than 24-hour care programs (less than 100 thousand persons each).

Figure 10 illustrates that the admission population in less than 24-hour care programs was similarly distributed across the various types of organizations. As already noted, multiservice mental health organizations accounted for the largest concentration of total persons admitted (41 percent), followed by freestanding outpatient clinics/partial care organizations (893 thousand or 27 percent), and non-Federal general hospitals (597 thousand or 18 percent). State/county mental hospitals admitted the smallest number of persons (only 34 thousand persons or 1 percent of the total less than 24-hour admissions).

Table 12. Residential care under care—Number and percent of total persons under care, by selected principal diagnoses and type of residential care program: United States, 1997

Selected principal diagnoses	Residential care program		
	Total, all residential care programs	RTCs for emotionally disturbed children	All other organizations[1]
		Number	
Drug-related disorders	1,820	*	1,379
Affective disorders	14,964	4,738	10,226
Schizophrenia	29,150	*	27,506
Personality disorders	964	520	444
Adjustment disorders	*	1,368	*
Organic disorders	754	*	733
Attention/conduct and developmental disorders	13,557	10,815	2,742
		Percent	
Drug-related disorders	2.2	*	2.5
Affective disorders	18.0	17.1	18.5
Schizophrenia	35.2	*	49.8
Personality disorders	1.2	1.9	0.8
Adjustment disorders	*	4.9	*
Organic disorders	0.9	*	1.3
Attention/conduct and developmental disorders	16.4	39.1	5.0

Source: *1997 Client/Patient Sample Survey.* Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.

[1] Includes the residential care programs of State and county mental hospitals, private psychiatric hospitals, non-Federal general hospitals, VA medical centers, and multiservice mental health organizations.

* Estimate is based on five or fewer sample cases or estimate has a relative standard error of 50% or higher. The estimate is not shown because it does not meet standards of reliability.

Note: Percentages do not add to 100% because only selected diagnoses are shown.

Gender, Race, and Ethnicity of Persons Under Care in Less Than 24-Hour Care Programs

- Of the estimated 2,150,662 persons under care in less than 24-hour care programs in 1997, males and females comprised nearly equal proportions (51 and 49 percent, respectively) of the total population, unlike the findings for populations in residential and inpatient under care programs, where males predominated (Tables 2, 8, and 14). By race/ethnicity, however, males did predominate among Hispanics/Latinos and among Asians/Pacific Islanders under care in less than 24-hour care programs.

- The percentage of females under care actually exceeded that of males in non-Federal general hospitals (57 vs. 43 percent) and multiservice mental health organizations (53 vs. 47 percent; Table 14). In non-Federal general hospitals, this was true for Whites and Blacks/African Americans; in multiservice mental health organizations, this was true only for Whites. It did not hold for Hispanics/Latinos under care in either type of organization.

- In a comparison of less than 24-hour, residential, and inpatient care programs (Tables 2, 8, and 14), it can be seen that overall, a larger percentage of females were under care in less

Table 13. Residential care admissions—Number and percent of total admissions, by selected principal diagnoses and type of residential care program: United States, 1997

Selected principal diagnoses	Residential care program		
	Total, all residential care programs	RTCs for emotionally disturbed children	All other organizations[1]
		Number	
Drug-related disorders	9,034	*	6,860
Affective disorders	41,465	7,353	34,112
Schizophrenia	30,036	564	29,472
Personality disorders	2,986	877	*
Adjustment disorders	10,022	3,463	6,559
Organic disorders	*	—	*
Attention/conduct and developmental disorders	19,881	14,875	5,006
		Percent	
Drug-related disorders	5.3	*	5.4
Affective disorders	24.2	17.0	26.6
Schizophrenia	17.5	1.3	23.0
Personality disorders	1.7	2.0	*
Adjustment disorders	5.8	8.0	5.1
Organic disorders	*	—	*
Attention/conduct and developmental disorders	11.6	34.3	3.9

Source: *1997 Client/Patient Sample Survey.* Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.

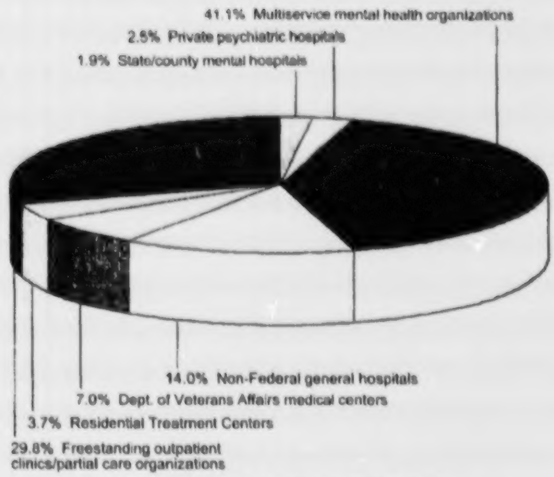
[1] Includes the residential care programs of State and county mental hospitals, private psychiatric hospitals, non-Federal general hospitals, VA medical centers, and multiservice mental health organizations.

* Estimate is based on five or fewer sample cases or estimate has a relative standard error of 50% or higher. The estimate is not shown because it does not meet standards of reliability.

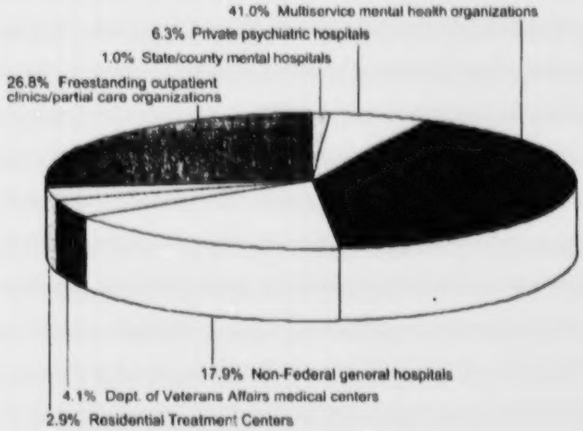
Note: Percentages do not add to 100% because only selected diagnoses are shown.

than 24-hour care programs (49 percent) than in residential (36 percent) and inpatient care programs (38 percent). By racial/ethnic group, the large percentage of females held only for Whites; for Blacks/African Americans, only the difference between less than 24-hour and inpatient care programs is statistically significant; for other racial/ethnic groups, less than 24-hour programs did not differ from residential and inpatient programs. When comparing specific types of organizations providing both inpatient and less than 24-hour care, it can be seen that overall, the percentage differences for gender held only within State/county mental hospitals.

- The racial/ethnic composition of the under care population in less than 24-hour care programs was similar to both residential and inpatient care programs (Figures 3, 7, and 11). Whites accounted for the majority of persons under care (67 percent). Blacks/African Americans comprised the next predominant racial/ethnic group (20 percent), followed by Hispanics/Latinos (11 percent). One interesting difference was found, however, for the under care populations of Hispanics/Latinos. The percentage under care in the less than 24-hour care programs of non-Federal general hospitals was three times that of Hispanics/Latinos under care in the inpatient care programs within this organization type (18 vs. 6 percent).



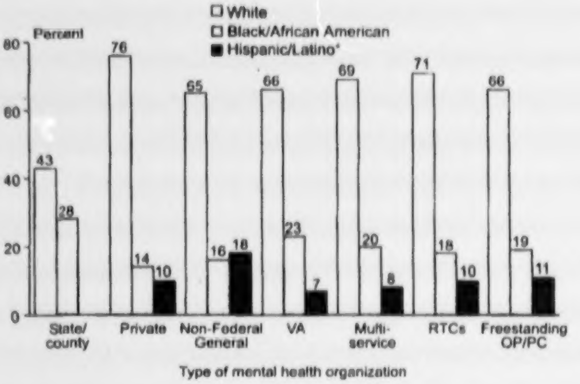
Under Care on a single day (2,150,662)



Admissions during 1997 (3,333,215)

Source: 1997 CPSS, SAB/DSCSD/CMHS/SAMHSA/DHHS

Figure 10. Distribution of the under care and admission populations, less than 24-hour care programs of specialty mental health organizations, United States, 1997



Source: 1997 CPSS, SAB/DSCSD/CMHS/SAMHSA/DHHS
*Note: Estimate is not reliable and is not shown for State/county mental hospitals

Figure 11. Race/ethnicity of the under care population in less than 24-hour care programs of specialty mental health organizations, United States, 1997

- The rate per 100,000 civilian population for persons under care in less than 24-hour care programs was highest in multiservice mental health organizations (332 per 100,000 population), followed by freestanding outpatient clinics/partial care organizations (240 per 100,000 population; Table 14). This pattern was also true for both males and females as well as all racial/ethnic groups, with a few exceptions. Among Asians/Pacific Islanders, differences in under care rates for non-Federal general hospitals and multiservice mental health organizations are not statistically significant; and among Hispanics/Latinos, under care rates did not differ appreciably for multiservice mental health organizations, freestanding outpatient clinics/partial care organizations, and non-Federal general hospitals (522, 474, and 380 per 100,000 population, respectively; Table 14).

- Under care rates in less than 24-hour care programs did not differ appreciably by gender, with the exception of VA medical centers (Table 14). However, notable differences existed by race/ethnicity. Asians/Pacific Islanders had the lowest under care rates of any racial/ethnic group (472 per 100,000 population); this held among both males and females, overall, as well as for multiservice mental health organizations (106 per 100,000 population), and freestanding outpatient clinics/partial care organizations (260 per 100,000 population; with the single exception of Hispanics/Latinos in these latter programs).

- American Indians/Alaska Natives and Blacks/African Americans had the highest overall under care rates (2,784 and 2,631 per

Table 14. Less than 24-hour care under care—Number, percent distribution, and rate per 100,000 U.S. civilian population[1] of persons under care, by race/ethnicity, gender, and type of less than 24-hour care program: United States, 1997

Race/ethnicity and gender	Less than 24-hour care program							
	Total, all less than 24-hour care programs	State/county mental hospitals	Private psychiatric hospitals	Non-Federal general hospitals	VA medical centers	Multi-service mental health organizations	RTCs for emotionally disturbed children	Free-standing outpatient clinics and partial care organizations
				Number				
Total	2,150,662	41,829	54,193	300,686	149,610	884,613	79,764	639,967
Male	1,090,699	20,831	26,113	130,073	139,594	417,509	39,839	316,740
Female	1,059,963	20,998	28,080	170,613	10,016	467,104	39,925	323,227
American Indian or Alaska Native	27,253	*	*	*	2,967	11,682	422	*
Male	16,404	—	—	*	2,967	7,645	*	*
Female	10,849	*	*	*	—	4,037	*	*
Asian or Pacific Islander	21,852	*	*	2,015	*	4,953	*	11,998
Male	15,763	*	*	*	*	2,978	*	8,848
Female	6,089	*	*	*	—	*	—	3,150
Black or African American	418,427	11,600	7,485	47,161	34,943	180,504	14,129	122,605
Male	220,898	*	3,333	16,306	32,437	85,585	8,143	68,665
Female	197,529	5,171	4,152	30,855	2,506	94,919	5,986	53,940
White	1,447,741	18,026	40,947	196,113	99,040	612,010	56,393	425,212
Male	706,038	8,113	19,330	79,107	91,703	282,817	28,092	196,876
Female	741,703	9,913	21,617	117,006	7,337	329,193	28,301	228,336
Hispanic or Latino	235,389	*	5,513	54,966	10,516	75,464	8,396	68,560
Male	131,596	*	*	33,232	10,343	38,484	2,905	36,929
Female	103,793	*	2,093	21,734	*	36,980	5,491	31,631
				Percent distribution				
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Male	50.7	49.8	48.2	43.3	93.3	47.2	49.9	49.5
Female	49.3	50.2	51.8	56.7	6.7	52.8	50.1	50.5
American Indian or Alaska Native	100.0	*	*	*	100.0	100.0	100.0	*
Male	60.2	—	—	*	100.0	65.4	*	*
Female	39.8	*	*	*	—	34.6	*	*
Asian or Pacific Islander	100.0	*	*	100.0	*	100.0	*	100.0
Male	72.1	*	*	*	*	60.1	*	73.7
Female	27.9	*	*	*	—	*	—	26.3
Black or African American	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Male	52.8	*	44.5	34.6	92.8	47.4	57.6	56.0
Female	47.2	44.6	55.5	65.4	7.2	52.6	42.4	44.0
White	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Male	48.8	45.0	47.2	40.3	92.6	46.2	49.8	46.3
Female	51.2	55.0	52.8	59.7	7.4	53.8	50.2	53.7
Hispanic or Latino	100.0	*	100.0	100.0	100.0	100.0	100.0	100.0
Male	55.9	*	*	60.5	98.4	51.0	34.6	53.9
Female	44.1	*	38.0	39.5	*	49.0	65.4	46.1

Table 14. Less than 24-hour care under care—Number, percent distribution, and rate per 100,000 U.S. civilian population[1] of persons under care, by race/ethnicity, gender, and type of less than 24-hour care program: United States, 1997 (continued)

	Less than 24-hour care program							
Race/ethnicity and gender	**Total, all less than 24-hour care programs**	**State/county mental hospitals**	**Private psychiatric hospitals**	**Non-Federal general hospitals**	**VA medical centers**	**Multiservice mental health organizations**	**RTCs for emotionally disturbed children**	**Freestanding outpatient clinics and partial care organizations**
	Rate per 100,000 civilian population[1]							
Total	808.4	15.7	20.4	113.0	56.2	332.5	30.0	240.5
Male	842.5	16.1	20.2	100.5	107.8	322.5	30.8	244.7
Female	776.0	15.4	20.6	124.9	7.3	342.0	29.2	236.6
American Indian or Alaska Native	2,784.3	*	*	*	307.7	1,195.9	43.2	*
Male	1,701.3	—	—	*	307.7	792.9	*	*
Female	1,083.1	*	*	*	—	403.0	*	*
Asian or Pacific Islander	472.5	*	*	43.4	*	106.1	*	259.8
Male	348.5	*	*	*	*	65.8	*	195.6
Female	124.0	*	*	*	—	*	—	64.2
Black or African American	2,630.9	73.2	46.6	290.2	230.0	1,127.8	89.3	773.8
Male	1,465.5	*	22.1	108.2	215.2	567.8	54.0	455.5
Female	1,165.4	30.5	24.5	182.0	14.8	560.0	35.3	318.3
White	1,494.6	18.6	42.2	201.6	104.6	631.0	58.2	438.4
Male	748.3	8.6	20.5	83.8	97.2	299.7	29.8	208.7
Female	746.3	10.0	21.8	117.7	7.4	331.2	28.5	229.8
Hispanic or Latino	1,628.4	*	38.1	380.0	72.3	522.4	58.3	474.4
Male	904.9	*	*	228.5	71.1	264.6	20.0	253.9
Female	723.5	*	14.6	151.5	*	257.8	38.3	220.5

Source: *1997 Client/Patient Sample Survey.* Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.

[1] U.S. Bureau of the Census population estimates for May 1997 are used as denominators for rate computations.

* Estimate is based on five or fewer sample cases or estimate has a relative standard error of 50% or higher. The estimate is not shown because it does not meet standards of reliability.

Note: Percentages may not add to 100% because of rounding.

100,000 population, respectively; Table 14). This pattern held within multiservice mental health organizations and for Blacks/African Americans in freestanding outpatient clinics/partial care programs. By gender, Blacks/African Americans had higher rates than Whites and Hispanics/Latinos for both males and females; additionally, American Indian/Alaska Native males had a higher under care rate than White males.

- Overall, Whites and Hispanics/Latinos did not differ appreciably with respect to under care rates. This pattern held for both males and females and overall for each type of organization (Table 14).

- When rates per 100,000 population for persons under care in less than 24-hour, inpatient, and residential care programs are compared, it is seen that rates were consistently higher in less than 24-hour than in inpatient and residential care programs

(Tables 2, 8, and 14). This was true, overall, for both males and females, and also within each racial/ethnic group.

- When comparing under care rates for persons in less than 24-hour and inpatient care programs within specific types of organizations, several notable differences emerge (Tables 2 and 14). In private psychiatric hospitals, the under care rates for Blacks/African Americans were approximately equal in inpatient and less than 24-hour programs; this pattern also held for Hispanics/Latinos. Interestingly, within State/county mental hospitals, differences between the two program settings were very slight, and in fact, under care rates for Whites were actually higher in inpatient than in less than 24-hour programs, both overall and for males.

Gender, Race, and Ethnicity of Persons Admitted to Less Than 24-Hour Care Programs

- The estimated number of admissions to less than 24-hour care programs during 1997 was 3,333,215 (Tables 1 and 15). Overall, males and females accounted for about equal proportions of total admissions to this program setting (49 and 51 percent, respectively), similar to the overall finding for the under care population receiving less than 24-hour care. In addition, while the proportions of male and female admissions appear to differ, both genders were about equally represented within each racial/ethnic group for all organization types combined.

- When comparisons by gender are made across organizational settings, data show that, as was true for the under care population in less than 24-hour care programs, more females than males were admitted to non-Federal general hospitals, overall (56 vs. 44 percent; Table 15). Observed differences in the proportions of males and females in other organizations were not found to be significant.

- Overall, the racial/ethnic composition of the admission population in less than 24-hour care programs was similar to inpatient and residential care programs. Whites accounted for the vast majority of persons admitted to less than 24-hour care (70 percent; Figure 12); Blacks/African Americans were second (17 percent), followed by Hispanics/Latinos (10 percent). This was true within VA medical centers, multiservice mental health organizations, and RTCs for emotionally disturbed children. While most persons admitted to State/county mental hospitals, private psychiatric hospitals, non-Federal general hospitals, and freestanding outpatient clinics/partial care organizations were White, the proportions of Hispanics/Latinos and Blacks/African Americans admitted to each of these types of organizations did not differ significantly.

- Within private psychiatric hospitals, Whites comprised a much larger percentage of admissions to less than 24-hour care (83 percent) than to inpatient care (67 percent; Figures 4 and 12). However, the percentage of Hispanics/Latinos admitted to less than 24-hour care in private psychiatric hospitals was only one-third as great as the percentage admitted to inpatient care (5 vs. 15 percent). By contrast, within non-Federal general hospitals, the percentage of Hispanics/Latinos admitted to less than 24-hour care was more than twice that for Hispanics/Latinos admitted to inpatient care (15 vs. 6 percent).

- Significant differences by race/ethnicity were also found within VA medical centers where Whites made up a much larger percentage of admissions to less than 24-hour care programs than to inpatient care programs (73 vs. 60 percent; Figures 4 and 12) Also within VA medical centers, the percentage of Blacks/African Americans admitted for less than 24-hour care was about half that of Blacks/African Americans admitted for inpatient care (17 vs. 33 percent).

- Comparisons by gender and race/ethnicity between the admission and under care populations in less than 24-hour care programs reveal that, overall, among Asians/Pacific Islanders, females comprised a greater percentage of the admission than the under care population (58 vs. 28 percent), and conversely, males comprised a much larger percentage of the under care than admission population (72 vs. 42 percent; Tables 14 and 15).

Table 15. Less than 24-hour care admissions—Number, percent distribution, and rate per 100,000 U.S. civilian population[1] of admissions, by race/ethnicity, gender, and type of less than 24-hour care program: United States, 1997

	Less than 24-hour care program							
Race/ethnicity and gender	**Total, all less than 24-hour care programs**	**State/ county mental hospitals**	**Private psychiatric hospitals**	**Non-Federal general hospitals**	**VA medical centers**	**Multi-service mental health organizations**	**RTCs for emotionally disturbed children**	**Free-standing outpatient clinics and partial care organizations**
				Number				
Total	3,333,215	34,314	209,092	597,319	135,985	1,365,854	97,990	892,661
Male	1,645,131	18,959	93,900	263,343	124,745	664,276	48,437	431,471
Female	1,688,084	15,355	115,192	333,976	11,240	701,578	49,553	461,190
American Indian or Alaska Native	43,565	—	*	4,205	*	23,801	*	11,569
Male	19,584	—	*	*	*	6,918	*	7,249
Female	23,981	—	—	*	—	16,883	*	4,320
Asian or Pacific Islander	52,853	*	1,809	4,903	1,845	23,843	*	18,494
Male	22,161	*	*	3,334	*	8,380	*	6,316
Female	30,692	*	*	1,569	*	15,463	—	12,178
Black or African American	563,517	7,260	23,750	85,914	23,352	253,542	20,168	149,531
Male	292,610	4,055	14,340	42,696	20,618	124,990	9,277	76,634
Female	270,907	3,205	9,410	43,218	2,734	128,552	10,891	72,897
White	2,337,167	21,275	173,155	414,486	99,409	940,469	67,911	620,462
Male	1,140,945	12,470	72,163	180,611	92,656	459,090	33,781	290,174
Female	1,196,222	8,805	100,992	233,875	6,753	481,379	34,130	330,288
Hispanic or Latino	336,113	4,167	9,551	87,811	9,080	124,199	8,700	92,605
Male	169,831	1,670	4,970	34,660	7,752	64,898	4,783	51,098
Female	166,282	2,497	4,581	53,151	1,328	59,301	3,917	41,507
				Percent distribution				
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Male	49.4	55.3	44.9	44.1	91.7	48.6	49.4	48.3
Female	50.6	44.7	55.1	55.9	8.3	51.4	50.6	51.7
American Indian or Alaska Native	100.0	—	*	100.0	*	100.0	*	100.0
Male	45.0	—	*	*	*	29.1	*	62.7
Female	55.0	—	—	*	—	70.9	*	37.3
Asian or Pacific Islander	100.0	*	100.0	100.0	100.0	100.0	*	100.0
Male	41.9	*	*	68.0	*	35.1	*	34.2
Female	58.1	*	*	32.0	*	64.9	—	65.8
Black or African American	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Male	51.9	55.9	60.4	49.7	88.3	49.3	46.0	51.2
Female	48.1	44.1	39.6	50.3	11.7	50.7	54.0	48.8
White	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Male	48.8	58.6	41.7	43.6	93.2	48.8	49.7	46.8
Female	51.2	41.4	58.3	56.4	6.8	51.2	50.3	53.2
Hispanic or Latino	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Male	50.5	40.1	52.0	39.5	85.4	52.3	55.0	55.2
Female	49.5	59.9	48.0	60.5	14.6	47.7	45.0	44.8

Table 15. Less than 24-hour care admissions—Number, percent distribution, and rate per 100,000 U.S. civilian population[1] of admissions, by race/ethnicity, gender, and type of less than 24-hour care program: United States, 1997 (continued)

	Less than 24-hour care program							
Race/ethnicity and gender	Total, all less than 24-hour care programs	State/ county mental hospitals	Private psychiatric hospitals	Non-Federal general hospitals	VA medical centers	Multi-service mental health organizations	RTCs for emotionally disturbed children	Free-standing outpatient clinics and partial care organizations
	Rate per 100,000 civilian population[1]							
Total	1,252.9	12.9	78.6	224.5	51.1	513.4	36.8	335.5
Male	1,270.8	14.6	72.5	203.4	96.4	513.1	37.4	333.3
Female	1,235.9	11.2	84.3	244.5	8.2	513.6	36.3	337.6
American Indian or Alaska Native	4,425.1	—	*	427.7	*	2,402.9	*	1,183.1
Male	2,031.1	—	*	*	*	717.5	*	751.8
Female	2,394.0	—	—	*	—	1,685.4	*	431.3
Asian or Pacific Islander	1,115.0	*	39.6	105.7	40.1	500.2	*	387.7
Male	490.0	*	*	73.7	*	185.3	*	139.6
Female	625.1	*	*	32.0	*	314.9	—	248.0
Black or African American	3,539.6	45.8	150.7	538.2	152.9	1,587.7	125.8	938.5
Male	1,941.2	26.9	95.1	283.3	136.8	829.2	61.5	508.4
Female	1,598.4	18.9	55.5	255.0	16.1	758.5	64.3	430.1
White	2,412.9	22.1	178.1	426.7	105.0	970.9	70.1	639.9
Male	1,209.2	13.2	76.5	191.4	98.2	486.6	35.8	307.5
Female	1,203.6	8.9	101.6	235.3	6.8	484.4	34.3	332.3
Hispanic or Latino	2,326.9	28.9	66.1	608.8	62.6	859.6	60.2	640.7
Male	1,167.8	11.5	34.2	238.3	53.3	446.3	32.9	351.4
Female	1,159.1	17.4	31.9	370.5	9.3	413.4	27.3	289.3

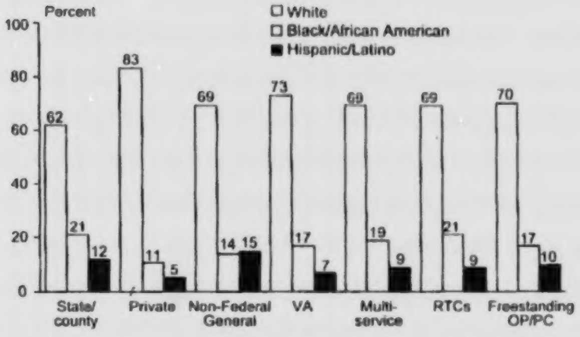
Source: *1997 Client/Patient Sample Survey.* Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.

[1] U.S. Bureau of the Census population estimates for May 1997 are used as denominators for rate computations.

* Estimate is based on five or fewer sample cases or estimate has a relative standard error of 50% or higher. The estimate is not shown because it does not meet standards of reliability.

Note: Percentages may not add to 100% because of rounding.

- A total of 1,253 persons per 100,000 population were admitted to less than 24-hour care programs (Table 15). The highest rate of admission was for persons in multiservice mental health organizations (513 per 100,000 population); the second highest rate, for persons in freestanding outpatient clinics/partial care organizations (336 per 100,000 population); next highest, for persons in non-Federal general hospitals (224 per 100,000 population). This pattern also held by gender. Overall, the lowest rate of admission was for persons in State/county mental hospitals (13 per 100,000 population); this was also true for both genders (with the exception of the extremely low admission rate for females in VA medical centers).
- In general, each racial/ethnic group had highest admission rates in multiservice mental health organizations and freestanding outpatient clinics/partial care organizations, when compared with other types of less than 24-hour programs (Table 15). Among Hispanics/



Source: 1997 CPSS, SAB/DSCSD/CMHS/SAMHSA/DHHS

Figure 12. Race/ethnicity of the admission population in less than 24-hour care programs of specialty mental health organizations, United States, 1997

Latinos, however, rates of admission to these two organization types did not differ significantly from non-Federal general hospitals.

- When compared with their respective numbers in the U.S. civilian population, males and females were admitted to less than 24-hour care programs at about the same rate, overall, and within each organizational setting, with the exception of VA medical centers (Table 15).

- Overall, for all less than 24-hour programs combined, Asians/Pacific Islanders had the lowest rates of admission (1,115 per 100,000 population), irrespective of gender (Table 15). American Indians/Alaska Natives and Blacks/African Americans had the highest admission rates, overall (4,425 and 3,540 per 100,000 population, respectively). By gender, it can be seen that among males these two racial/ethnic groups also had higher rates than Whites, and Blacks/African Americans had a higher admission rate than Hispanics/Latinos. Fewer differences existed among females, for whom Blacks/African Americans had a higher admission rate than Whites.

- By type of organization providing less than 24-hour care, it can be seen that specific organizations varied from the pattern noted above to differing degrees (Table 15). In multiservice mental health organizations, American Indians/Alaska Natives and Blacks/African Americans had the highest admission rates. In non-Federal general hospitals, Asians/Pacific Islanders had the lowest rate of admission compared with all other racial/ethnic groups in this setting. In freestanding outpatient/partial care programs, this was true only among male admissions. In private psychiatric hospitals, admission rates for Asians/Pacific Islanders as well as for Hispanics/Latinos were lower than rates for Whites. In VA medical centers, Hispanic/Latino males had lower rates of admission than White and Black/African American males. By contrast, in State/county mental hospitals and RTCs for emotionally disturbed children, the admission rates for Blacks/African Americans, Whites, and Hispanics/Latinos did not differ from each other, overall or among males and females.

- A number of notable differences by gender and race/ethnicity existed between the rates for persons admitted and the rates for persons under care in less than 24-hour care programs (Tables 14 and 15). Because many more persons were admitted than under care, the overall admission rate of 1,253 per 100,000 population was much higher than the under care rate of 808 per 100,000; this pattern held for males and females, overall and within private psychiatric hospitals, non-Federal general hospitals, multiservice mental health organizations, and freestanding outpatient clinics/partial care organizations. It also held overall for each racial/ethnic group with the exception of American Indians/Alaska Natives (because of relatively small sample sizes for this racial/ethnic group).

- Given the considerable difference in the numbers of persons admitted to less than 24-hour care programs and those admitted to residential care programs, it follows that the rates of admission were substantially greater in less than 24-hour than in residential care programs, overall, for males and females, and for each racial/ethnic group (Tables 9 and 15).

- Similarly, the overall rate at which persons were admitted to less than 24-hour care programs was much greater than the overall rate for persons admitted to inpatient care programs; this was true as well for total males and females (Tables 3 and 15). However, the reverse was true within certain organizations providing care in the two program settings; in State/county mental hospitals, private psychiatric hospitals, and non-Federal general hospitals, admission rates for persons in inpatient care programs were greater than the rates for persons in less than 24-hour care programs, overall, as well as among males and females.

- Additional comparisons between less than 24-hour care programs and inpatient programs by race/ethnicity reveal that Whites and Hispanics/Latinos were admitted to less than 24-hour care at greater rates than to inpatient care programs; these findings are also observed among males and females of these two racial/ethnic groups, and among Asian/Pacific Islander males and Black/African American females (Tables 3 and 15).

- Differences are also noted in the rates at which persons were admitted for less than 24-hour and inpatient care programs by race/ethnicity within the various organizations providing care in these two settings (Tables 3 and 15). Blacks/African Americans and Whites had greater rates of admission to the inpatient care programs than to the less than 24-hour care programs of State/county mental hospitals, private psychiatric hospitals, and non-Federal general hospitals; these findings also held true for males and females of both racial/ethnic groups, with the exception of White females in private psychiatric hospitals (where the admission rates do not differ statistically).

- Similarly, Hispanics/Latinos had greater rates of admission to the inpatient than to the less than 24-hour care programs of State/county mental hospitals and private psychiatric hospitals; this pattern held true for males within both types of organizations and for females within private psychiatric hospitals (Tables 3 and 15). By contrast, the admission rates for Whites, overall, and among males were greater in the less than 24-hour than in the inpatient care programs of VA medical centers.

Age of Persons Under Care in Less Than 24-Hour Care Programs

- Of the estimated 2.2 million persons under care in less than 24-hour care programs, most were in the 25 to 44 year age group (816 thousand or 38 percent), followed by persons ages 45 to 64 (26 percent) and children and youth under age 18 (24 percent; Table 16). The 18 to 24 and 65 and older age groups were much smaller in size (6 percent each).

- When looking at the age distribution of persons under care within each type of less than 24-hour care program, it can be seen that multiservice mental health organizations and freestanding outpatient clinics/partial care organizations had very similar age distributions; in both of these organization types, the 25 to 44 year group accounted for the largest percentage of persons under care, and the 45 to 64 year group and under age 18 group were about equal (Table 16). Private psychiatric hospitals and non-Federal general hospitals differed slightly with respect to age distributions; in these two organization types, all three age groups (under 18, 25 to 44, and 45 to 64) were essentially equally represented.

- The age distributions of persons under care in State/county mental hospitals, VA medical centers and RTCs for emotionally disturbed children, however, differed considerably from the other organization types (Table 16). Within State/county mental hospitals, more than one-third of total persons under care were in the 25 to 44 age group, another one-third were ages 45 to 64, and persons under age 18 were much less common (only 11 percent). As could be expected, more than half (53 percent) of all persons under care in VA medical centers were persons ages 45 to 64 and the remaining half were about equally distributed between the 25 to 44 and 65 and older age groups. By contrast, nearly half (47 percent) of persons under care in RTCs were children and youth under age 18. Adults under care in RTCs were mostly concentrated in the 25 to 44 and 45 to 64 age groups (28 and 17 percent, respectively).

- Figure 13 shows that when comparing across inpatient, residential, and less than 24-hour

Table 16. Less than 24-hour care under care—Number, percent distribution, and rate per 100,000 U.S. civilian population[1] of persons under care, by age and type of less than 24-hour care program: United States, 1997

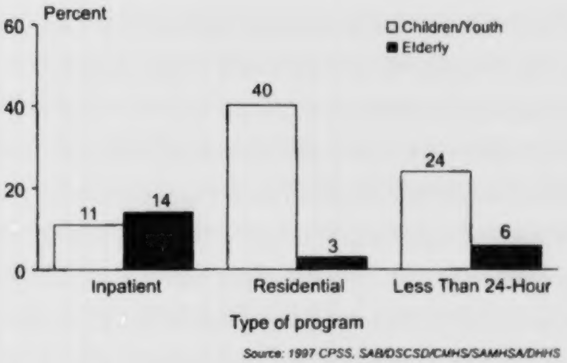
	Less than 24-hour care program							
Age	**Total, all less than 24-hour care programs**	**State/ county mental hospitals**	**Private psychiatric hospitals**	**Non-Federal general hospitals**	**VA medical centers**	**Multi-service mental health organizations**	**RTCs for emotionally disturbed children**	**Free-standing outpatient clinics and partial care organizations**
				Number				
Total, all ages	2,150,662	41,829	54,193	300,686	149,610	884,613	79,764	639,967
Under 18	517,210	4,664	16,291	75,248	—	202,727	37,421	180,859
Under 5	19,910	*	*	1,563	—	8,540	1,401	7,549
5–9	155,958	1,606	3,507	25,961	—	62,090	11,337	51,457
10–12	131,587	646	4,382	18,635	—	47,398	7,641	52,885
13–17	209,755	2,352	7,605	29,089	—	84,699	17,042	68,968
18–24	130,064	*	2,503	21,272	*	63,911	3,419	36,067
25–44	815,988	16,072	18,027	99,603	37,934	375,279	22,637	246,436
45–64	561,866	15,389	13,147	78,290	79,352	213,591	13,525	148,572
65 and older	125,534	2,888	4,225	26,273	32,248	29,105	2,762	28,033
				Percent distribution				
Total, all ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 18	24.0	11.2	30.1	25.0	—	22.9	46.9	28.3
Under 5	0.9	*	*	0.5	—	1.0	1.8	1.2
5–9	7.3	3.8	6.5	8.6	—	7.0	14.2	8.0
10–12	6.1	1.5	8.1	6.2	—	5.4	9.6	8.3
13–17	9.8	5.6	14.0	9.7	—	9.6	21.4	10.8
18–24	6.0	*	4.6	7.1	*	7.2	4.3	5.6
25–44	37.9	38.4	33.3	33.1	25.4	42.4	28.4	38.5
45–64	26.1	36.8	24.3	26.0	53.0	24.1	17.0	23.2
65 and older	5.8	6.9	7.8	8.7	21.6	3.3	3.5	4.4
				Rate per 100,000 civilian population[1]				
Total, all ages	808.4	15.7	20.4	113.0	56.2	332.5	30.0	240.5
Under 18	744.1	6.7	23.4	108.3	—	291.7	53.8	260.2
Under 5	104.1	*	*	8.2	—	44.6	7.3	39.5
5–9	791.4	8.1	17.8	131.7	—	315.1	57.5	261.1
10–12	1,147.5	5.6	38.2	162.5	—	413.3	66.6	461.2
13–17	1,092.6	12.3	39.6	151.5	—	441.2	88.8	359.2
18–24	531.9	*	10.2	87.0	*	261.4	14.0	147.5
25–44	985.3	19.4	21.8	120.3	45.8	453.1	27.3	297.6
45–64	1,019.4	27.9	23.9	142.0	144.0	387.5	24.5	269.6
65 and older	367.6	8.5	12.4	76.9	94.4	85.2	8.1	82.1

Source: *1997 Client/Patient Sample Survey.* Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.

[1] U.S. Bureau of the Census population estimates for May 1997 are used as denominators for rate computations.

* Estimate is based on five or fewer sample cases or estimate has a relative standard error of 50% or higher. The estimate is not shown because it does not meet standards of reliability.

Note: Percentages may not add to 100% because of rounding.



Source: 1997 CPSS, SAB/DSCSD/CMHS/SAMHSA/DHHS

Figure 13. Children & youth and elderly as percentages of the under care population in inpatient, residential, and less than 24-hour care programs of specialty mental health organizations, United States, 1997

care programs, residential care programs had the largest percentage of children and youth under age 18 under care (40 percent), followed by less than 24-hour programs (24 percent); the percentage of inpatient programs was much smaller (11 percent). By contrast, the proportion of elderly persons ages 65 and older under care in inpatient care programs was more than twice that of elderly persons under care in less than 24-hour care programs (14 vs. 6 percent).

- The greater percentage of children and youth under care in residential care programs than in less than 24-hour care programs was due totally to youth ages 13 to 17 (Tables 10 and 16); children ages 5 to 9 actually represented a larger percentage of those under care in less than 24-hour (7 percent) than in residential care programs (3 percent).

- Within less than 24-hour care programs overall, elderly persons ages 65 and older had the lowest under care rate (368 per 100,000 population) compared with all other age groups, except when looking at detailed children and youth rates, where children under the age of 5 had an extremely low under care rate (104 per 100,000 population; Table 16). By contrast, persons ages 10 to 12, 13 to 17, 45 to 64, and 25 to 44 each had under care rates close to or higher than 1,000 per 100,000 population.

- In multiservice mental health organizations and in freestanding outpatient clinics/partial care organizations, children under age 5 had the lowest under care rate, and elderly persons the next lowest rate; in non-Federal general hospitals, children under 5 had the lowest rate, but the under care rate for elderly persons did not differ appreciably from other age groupings (Table 16). By contrast, within RTCs for emotionally disturbed children, children and youth under age 18, as well as the individual age groups of children ages 5 to 9, children ages 10 to 12, and youth ages 13 to 17, had higher under care rates than those for each age group 18 and older.

- Multiservice mental health organizations and freestanding outpatient clinics/partial care organizations generally had the highest under care rates for persons irrespective of age group when compared with other types of organizations (Table 16). The only exceptions were for elderly persons under care, whose rates in these two settings did not differ from those in VA medical centers and non-Federal general hospitals, and for the 18 to 24 year group, for whom no statistical difference was found between the under care rates for non-Federal general hospitals and freestanding outpatient clinics/partial care organizations.

- Similar to their respective numbers, persons within each age group had substantially higher under care rates in less than 24-hour care programs than in residential and inpatient care programs, overall (Tables 4, 10, and 16). However, in State/county mental hospitals, the under care rate for elderly persons ages 65 and older was actually lower in less than 24-hour than in inpatient care programs (8 vs. 19 per 100,000 population).

Age of Persons Admitted to Less Than 24-Hour Care Programs

- As was true for the under care population, the largest concentration of the 3.3 million persons admitted to less than 24-hour care programs was found among those ages 25 to 44 (1.4 million or 41 percent; Table 17). Children and youth under age 18 comprised the next largest concentration of admissions to this setting, accounting for 966 thousand admissions (29 percent). Elderly persons, ages 65 and older, represented a very small proportion, only 140 thousand admissions (4 percent).

- The 25 to 44 and under 18 age groups comprised the largest percentages of admissions within each organization type, with a few exceptions (Table 17). Within non-Federal general hospitals, no statistically significant difference was found between the percentage of children and youth under age 18 and persons ages 45 to 64 who were admitted (28 vs. 18 percent). In State/county mental hospitals, the 25 to 44 age group (39 percent) did not differ significantly from persons ages 45 to 64 (26 percent), and children and youth under age 18 did not represent a major group of admissions (18 percent).

- Given the nature of the VA medical centers, it could be expected that the age distribution of admissions would also differ considerably from other types of less than 24-hour programs. The largest concentration of persons admitted to VA medical centers was found among persons ages 45 to 64 (47 percent); the second largest among persons ages 25 to 44 (34 percent); and the next largest among persons ages 65 and older (18 percent; Table 17).

- Overall, among the under age 18 population, more youths ages 13 to 17 were admitted to less than 24-hour care programs than were younger children ages 10 to 12, 5 to 9, and under 5 (Table 17). This finding was true for private psychiatric hospitals and multiservice mental health organizations. Significantly larger proportions of youth ages 13 to 17 were admitted to RTCs for emotionally disturbed children (24 percent) and private psychiatric hospitals (22 percent) than to non-Federal general hospitals (11 percent), multiservice mental health organizations (13 percent), and freestanding outpatient clinics/partial care organizations (13 percent).

- A comparison of the relative sizes of the admission and under care populations in less than 24-hour care programs by age reveals that, overall, more persons were admitted than under care for specific younger age groups: total under 18, under 5, 13 to 17, and 18 to 24 (Tables 16 and 17). By contrast, overall, a greater proportion of persons ages 45 to 64 were under care than were admitted to less than 24-hour care programs.

- Comparisons of the age distributions for persons admitted to inpatient, residential, and less than 24-hour care programs reveal a number of differences among the three program types (Tables 5, 11, and 17). Overall, a significantly greater percentage of children and youth under age 18 were admitted to less than 24-hour programs than to inpatient care programs (29 vs. 14 percent); this was also true for each specific children/youth age group. Similar results were found within non-Federal general hospitals. Not surprisingly, overall, the percentage of youth ages 13 to 17 admitted to residential care programs was even greater than for less than 24-hour care programs, more than twice as high (29 vs.13 percent). By contrast, a greater proportion of persons in the 25 to 44 age group were admitted to inpatient programs than to less than 24-hour care programs, overall, and within non-Federal general hospitals (50 vs. 38 percent).

- For all organization types combined, elderly persons ages 65 and older were more frequently admitted to inpatient than to less than 24-hour care programs (11 vs. 4 percent; Tables 5 and 17); this finding also held true within private psychiatric hospitals.

- Figure 14 illustrates that when compared with their numbers in the U.S. population, youth ages 13 to 17 were admitted to less than 24-hour care programs at the greatest rate (2,211 per 100,000 population; Table 17). Children under age 5 and elderly persons ages 65 and older were admitted at the lowest rates of any age group.

- Similar to the under care population within less than 24-hour care programs, multiservice mental health organizations and freestanding outpatient clinics/partial care organizations had the highest rates of admission for each age group, with a few exceptions (Table 17). For persons in the 10 to 12 and 45 to 64 year age groups, differences between freestanding outpatient clinics/partial care organizations and non-Federal general hospitals were not statistically significant. Among elderly persons ages 65 and older, admission rates to multiservice mental health organiza-

Table 17. Less than 24-hour care admissions—Number, percent distribution, and rate per 100,000 U.S. civilian population[1] of admissions, by age and type of less than 24-hour care program: United States, 1997

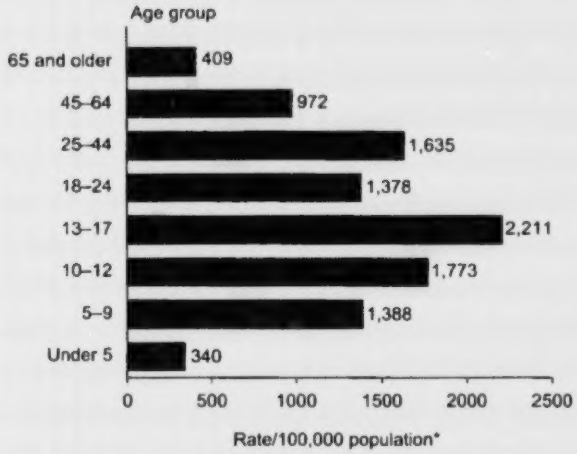
	Less than 24-hour care program							
Age	**Total, all less than 24-hour care programs**	**State/ county mental hospitals**	**Private psychiatric hospitals**	**Non-Federal general hospitals**	**VA medical centers**	**Multi-service mental health organizations**	**RTCs for emotionally disturbed children**	**Free-standing outpatient clinics and partial care organizations**
				Number				
Total, all ages	3,333,215	34,314	209,092	597,319	135,985	1,365,854	97,990	892,661
Under 18	966,321	6,052	76,893	164,414	—	381,853	49,004	288,105
Under 5	65,060	*	*	10,861	—	23,527	2,713	26,596
5–9	273,547	1,375	14,144	51,022	—	103,466	12,863	90,677
10–12	203,289	709	16,624	37,535	—	82,725	9,959	55,737
13–17	424,425	3,760	44,970	64,996	—	172,135	23,469	115,095
18–24	336,858	4,420	19,260	52,636	1,321	147,717	10,142	101,362
25–44	1,354,300	13,369	80,126	228,447	45,940	600,699	26,035	359,684
45–64	536,004	8,820	28,888	104,323	63,708	199,967	11,283	119,015
65 and older	139,732	1,653	3,925	47,499	25,016	35,618	*	24,495
				Percent distribution				
Total, all ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 18	29.0	17.6	36.8	27.5	—	28.0	50.0	32.3
Under 5	2.0	*	*	1.8	—	1.7	2.8	3.0
5–9	8.2	4.0	6.8	8.5	—	7.6	13.1	10.2
10–12	6.1	2.1	8.0	6.3	—	6.1	10.2	6.2
13–17	12.7	11.0	21.5	10.9	—	12.6	24.0	12.9
18–24	10.1	12.9	9.2	8.8	1.0	10.8	10.4	11.4
25–44	40.6	39.0	38.3	38.2	33.8	44.0	26.6	40.3
45–64	16.1	25.7	13.8	17.5	46.8	14.6	11.5	13.3
65 and older	4.2	4.8	1.9	8.0	18.4	2.6	*	2.7
				Rate per 100,000 civilian population[1]				
Total, all ages	1,252.9	12.9	78.6	224.5	51.1	513.4	36.8	335.5
Under 18	1,390.3	8.7	110.6	236.5	—	549.4	70.5	414.5
Under 5	340.0	*	*	56.8	—	123.0	14.2	139.0
5–9	1,388.1	7.0	71.8	258.9	—	525.0	65.3	460.1
10–12	1,772.8	6.2	145.0	327.3	—	721.4	86.8	486.1
13–17	2,210.8	19.6	234.2	338.6	—	896.6	122.2	599.5
18–24	1,377.6	18.1	78.8	215.3	5.4	604.1	41.5	414.5
25–44	1,635.3	16.1	96.8	275.8	55.5	725.3	31.4	434.3
45–64	972.5	16.0	52.4	189.3	115.6	362.8	20.5	215.9
65 and older	409.1	4.8	11.5	139.1	73.2	104.3	*	71.7

Source: *1997 Client/Patient Sample Survey.* Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.

[1] U.S. Bureau of the Census population estimates for May 1997 are used as denominators for rate computations.

* Estimate is based on five or fewer sample cases or estimate has a relative standard error of 50% or higher. The estimate is not shown because it does not meet standards of reliability.

Note: Percentages may not add to 100% because of rounding.



Source: 1997 CPSS, SAB/DSCSD/CMHS/SAMHSA/DHHS
*U.S. Bureau of the Census population estimates for May 1997 are used as denominators for rates

Figure 14. Admission rates per 100,000 U.S. civilian population by age groups, less than 24-hour programs of specialty mental health organizations, United States, 1997

tions and freestanding outpatient clinics/partial care organizations were about equal with those for non-Federal general hospitals and VA medical centers.

- Comparisons between the rates of admission and under care rates for less than 24-hour care programs reveal that overall, the rates for persons admitted were greater than the rates for persons under care in all age groups, with the exception of those ages 45 to 64 and elderly persons ages 65 and older (Tables 16 and 17).

- Comparisons of the admission rates for persons in less than 24-hour care programs with the admission rates for persons in residential and inpatient care programs reveal that, overall, persons in every age group were admitted at substantially greater rates to less than 24-hour programs than to residential care programs (Tables 11 and 17). This finding also held true in a comparison with inpatient care programs, with the exception of elderly persons ages 65 and older; persons in this age group were admitted to inpatient care at a greater rate than they were admitted to less than 24-hour care, both overall and within each organization type, except VA medical centers (Tables 5 and 17).

- Inpatient admission rates were also higher than less than 24-hour care rates in State/county mental hospitals and private psychiatric hospitals for all age groups except children ages 5 to 9 (Tables 5 and 17). In non-Federal general hospitals, all adults 18 and older were admitted to inpatient care at greater rates than they were admitted to less than 24-hour care; for children and youth under age 18 and, specifically, children ages 5 to 9, the reverse was true.

Principal Psychiatric Diagnosis[2] of Persons Under Care in Less Than 24-Hour Care Programs

- The diagnostic grouping of affective disorders was the most predominant grouping reported for persons under care in less than 24-hour care programs (32 percent), followed by schizophrenia (22 percent), attention/conduct disorders (10 percent), and adjustment disorders (8 percent; Table 18).

- This pattern held somewhat true across the various types of less than 24-hour care programs (Table 18). In freestanding outpatient clinics/partial care organizations, affective disorders ranked first and schizophrenia ranked second. In private psychiatric hospitals and non-Federal general hospitals, affective disorders ranked first, but the percentage diagnosed with schizophrenia was not significantly greater than that for other selected diagnoses. In State/county mental hospitals and multiservice mental health organizations, affective disorders and schizophrenia ranked as the leading diagnostic groupings over other diagnoses. Schizophrenia and affective disorders were also fairly common diagnoses among persons under care in VA medical centers, but the percentages of persons diagnosed with schizophrenia and alcohol disorders did not differ significantly. In RTCs for emotionally disturbed children, affective disorders ranked first, with the exception of attention/conduct disorders.

- Overall, the percentage of persons under care in less than 24-hour care programs with diag-

Table 18. Less than 24-hour care under care—Number and percent of total persons under care, by selected principal diagnoses and type of less than 24-hour care program: United States, 1997

Selected principal diagnoses	Total, all less than 24-hour care programs	State/county mental hospitals	Private psychiatric hospitals	Non-Federal general hospitals	VA medical centers	Multi-service mental health organizations	RTCs for emotionally disturbed children	Free-standing outpatient clinics and partial care organizations
	Less than 24-hour care program							
	Number							
Alcohol-related disorders	59,061	*	*	3,624	12,195	22,390	*	13,587
Drug-related disorders	45,285	*	*	*	7,346	21,277	4,856	8,331
Affective disorders	684,107	13,349	19,423	121,444	45,146	278,743	19,177	186,825
Schizophrenia	468,675	16,755	6,588	43,862	27,238	228,904	8,924	136,404
Personality disorders	39,508	*	*	5,317	*	13,198	949	17,127
Adjustment disorders	175,352	2,178	5,292	30,292	4,574	68,909	8,935	55,172
Organic disorders	32,969	*	*	4,580	4,540	11,162	*	10,275
Attention/conduct and developmental disorders	225,272	1,998	5,012	31,064	—	94,827	15,942	76,429
	Percent							
Alcohol-related disorders	2.7	*	*	1.2	8.2	2.5	*	2.1
Drug-related disorders	2.1	*	*	*	4.9	2.4	6.1	1.3
Affective disorders	31.8	31.9	35.8	40.4	30.2	31.5	24.0	29.2
Schizophrenia	21.8	40.1	12.2	14.6	18.2	25.9	11.2	21.3
Personality disorders	1.8	*	*	1.8	*	1.5	1.2	2.7
Adjustment disorders	8.2	5.2	9.8	10.1	3.1	7.8	11.2	8.6
Organic disorders	1.5	*	*	1.5	3.0	1.3	*	1.6
Attention/conduct and developmental disorders	10.5	4.8	9.2	10.3	—	10.7	20.0	11.9

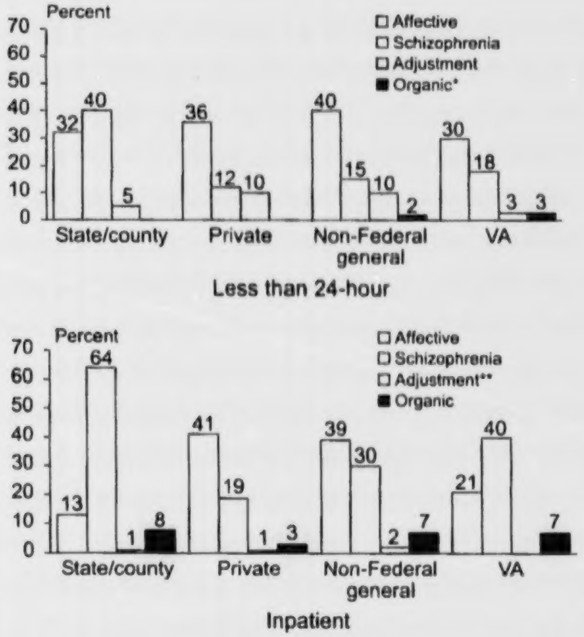
Source: *1997 Client/Patient Sample Survey.* Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.

* Estimate is based on five or fewer sample cases or estimate has a relative standard error of 50% or higher. The estimate is not shown because it does not meet standards of reliability.

Note: Percentages do not add to 100% because only selected diagnoses are shown.

noses of affective disorders was greater than that found for the inpatient under care population (32 vs. 25 percent; Tables 6 and 18). However, across the specific types of programs, this finding held true only within State/county mental hospitals.

- For persons under care diagnosed with schizophrenia, a different picture emerges between inpatient and less than 24-hour care programs; the percentage of persons with diagnoses of schizophrenia in inpatient care programs was twice that of their counterparts in less than 24-hour care programs, overall (46 vs. 22 percent; Tables 6 and 18). Figure 15 shows that this was also true within non-Federal general hospitals (30 vs. 15 percent), and VA medical centers (40 vs. 18 percent), and that the difference was also considerable within State/county mental hospitals (64 vs. 40 percent).



Source: 1997 CPSS, SAB/DSCSD/CMHS/SAMHSA/DHHS

**Note: Estimates are not reliable and are not shown for State/county & private psychiatric hospitals*

***Note: Estimate is not reliable and is not shown for VA medical centers*

Figure 15. Comparison of the percentages of the under care populations with specific diagnoses in less than 24-hour and inpatient care programs of specialty mental health organizations, United States, 1997

- Other notable comparisons between less than 24-hour care programs and their inpatient counterparts can be seen in the distribution of persons diagnosed with adjustment disorders and organic disorders (Figure 15 and Table 18). The percentage of persons diagnosed with adjustment disorders was greater in less than 24-hour care programs, overall, and in private psychiatric hospitals and non-Federal general hospitals. By contrast, the percentage of persons diagnosed with organic disorders was greater in inpatient care programs, overall, and in non-Federal general hospitals.

- When compared with the under care population in residential care programs, the percentage of persons diagnosed with affective disorders was much greater in less than 24-hour than in residential care programs (32 vs. 18 percent; Tables 12 and 18). By contrast, the percentages of persons under care with diagnoses of schizophrenia and attention/conduct disorders were significantly greater in residential care programs than in less than 24-hour care programs.

Principal Psychiatric Diagnosis[2] of Persons Admitted to Less Than 24-Hour Care Programs

- Similar to the finding for the under care population in less than 24-hour care programs, overall, and for a number of organization types, the diagnostic grouping of affective disorders was predominant among persons admitted to less than 24-hour care (27 percent; Table 19). This finding held true within private psychiatric hospitals, non-Federal general hospitals, VA medical centers, and multiservice mental health organizations.

- Within State/county mental hospitals, the proportions of persons admitted who were diagnosed with affective disorders (27 percent) and with schizophrenia (20 percent) predominated over other diagnostic groupings (Table 19). Within freestanding outpatient clinics/partial care organizations, the proportion of persons admitted with diagnoses of affective disorders or adjustment disorders (21 percent, each) predominated over other diagnostic groups; the schizophrenia

Table 19. Less than 24-hour care admissions—Number and percent of total admissions, by selected principal diagnoses and type of less than 24-hour care program: United States, 1997

Selected principal diagnoses	Less than 24-hour care program							
	Total, all less than 24-hour care programs	State/ county mental hospitals	Private psychiatric hospitals	Non-Federal general hospitals	VA medical centers	Multi-service mental health organizations	RTCs for emotionally disturbed children	Free-standing outpatient clinics and partial care organizations
	Number							
Alcohol-related disorders	166,017	*	11,874	26,714	18,608	76,485	3,829	26,660
Drug-related disorders	133,976	*	18,046	12,910	10,271	55,867	*	30,303
Affective disorders	909,323	9,392	83,897	228,558	36,290	337,977	24,122	189,087
Schizophrenia	319,957	6,888	7,553	58,716	15,126	160,405	*	70,091
Personality disorders	64,151	*	3,030	8,194	2,229	26,213	1,861	22,365
Adjustment disorders	541,335	2,496	19,035	81,793	8,096	217,279	21,785	190,851
Organic disorders	35,697	*	*	8,948	3,874	15,754	—	*
Attention/ conduct and developmental disorders	347,203	2,549	20,196	58,833	—	150,317	18,100	97,208
	Percent							
Alcohol-related disorders	5.0	*	5.7	4.5	13.7	5.6	3.9	3.0
Drug-related disorders	4.0	*	8.6	2.2	7.6	4.1	*	3.4
Affective disorders	27.3	27.4	40.1	38.3	26.7	24.7	24.6	21.2
Schizophrenia	9.6	20.1	3.6	9.8	11.1	11.7	*	7.9
Personality disorders	1.9	*	1.4	1.4	1.6	1.9	1.9	2.5
Adjustment disorders	16.2	7.3	9.1	13.7	6.0	15.9	22.2	21.4
Organic disorders	1.1	*	*	1.5	2.8	1.2	—	*
Attention/ conduct and developmental disorders	10.4	7.4	9.7	9.8	—	11.0	18.5	10.9

Source: *1997 Client/Patient Sample Survey.* Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services.

* Estimate is based on five or fewer sample cases or estimate has a relative standard error of 50% or higher. The estimate is not shown because it does not meet standards of reliability.

Note: Percentages do not add to 100% because only selected diagnoses are shown.

diagnostic grouping was not nearly so common in these organizations (only 8 percent) as in State/county mental hospitals. In RTCs for emotionally disturbed children, affective disorders were joined by adjustment disorders and attention/conduct disorders as the most frequently occurring diagnoses among those under care (25, 22, and 18 percent, respectively).

- Diagnoses of schizophrenia were somewhat less predominant among admissions than among those under care in less than 24-hour care programs (10 vs. 22 percent; Tables 18 and 19). The proportion of persons admitted to less than 24-hour care programs with diagnoses of adjustment disorders was twice that of their counterparts under care in this setting (16 vs. 8 percent).

- The percentage of admissions with affective disorders was considerably higher in the less than 24-hour care programs of private psychiatric hospitals and non-Federal general hospitals (40 and 38 percent, respectively), compared with most other organization types (differences were not statistically significant with State/county mental hospitals; Table 19). In State/county mental hospitals, the percentage of admissions with schizophrenia (20 percent) tended to be higher than that found for most other organization types (differences were not statistically significant with VA medical centers and multiservice mental health organizations). In VA medical centers, the proportion of persons admitted with diagnoses of alcohol-related disorders (14 percent) was greater than that for most other types of organizations (differences are not statistically significant with State/county mental hospitals and private psychiatric hospitals).

- A look at the diagnostic distributions of inpatient, residential, and less than 24-hour care programs reveals a number of interesting comparisons (Tables 7, 13, and 19). The percentage of persons admitted with diagnoses of schizophrenia was greater overall in inpatient (20 percent) and residential (18 percent) than in less than 24-hour care programs overall (10 percent). Comparison of inpatient and less than 24-hour care by organization type reveals that this was also true for private psychiatric hospitals, non-Federal general hospitals, and VA medical centers.

- Conversely, the percentage of persons admitted with diagnoses of adjustment disorders was greater in less than 24-hour (16 percent; Table 19) than in inpatient and residential care programs overall (4 and 6 percent, respectively; Tables 7 and 13). By specific type of organization, this difference between inpatient and less than 24-hour care held within private psychiatric hospitals and non-Federal general hospitals.

- Additionally, the overall percentage of persons admitted with affective disorders was greater in inpatient than in less than 24-hour care programs (40 vs. 27 percent; Tables 7 and 19); however, the opposite was true within VA medical centers, where 27 percent of persons admitted to less than 24-hour care programs had diagnoses of affective disorders, compared with 17 percent admitted to inpatient care settings.

Summary

This chapter presents some basic national information and highlights differences in the characteristics of persons who received treatment in the inpatient, residential, and less than 24-hour care programs of specialty mental health organizations during 1997. Overall, approximately 2.3 million persons were under care and 5.5 million were admitted to these programs during 1997. As could be expected, with the current, continuing emphasis on provision of care in the least restrictive community setting, a greater number of persons received mental health services in less than 24-hour care programs than in inpatient and residential programs.

The number of admissions outnumbered the under care population by a wide margin in all three program types, and this differential was most dramatic for inpatient care programs, where almost 20 times as many persons were admitted during 1997 as were under care at a point in time. Non-Federal general hospitals had the most inpatient admissions, and State/county mental hospitals had the largest number of persons under care. In less than 24-hour care programs, multiservice mental health organizations were the largest program type for both the under care and admission populations, accounting for 41 percent of each.

More males than females were treated in inpatient and residential programs, while both genders were fairly equally represented in less than 24-hour care settings. Whites comprised the preponderance of persons receiving service in 1997; Blacks/African Americans and Hispanics/Latinos also accounted for large numbers of persons receiving service. Relative to their numbers in the U.S. population, American Indians/Alaska Natives and Blacks/African Americans tended to have higher rates of care, whereas Asians/Pacific Islanders tended to have lower rates of care than other racial/ethnic groups.

Persons ages 25 to 44 comprised the largest proportion of persons receiving care in inpatient and less than 24-hour care programs. In residential programs, children and youth and persons ages 25 to 44 comprised approximately equal proportions of persons receiving services. As a group, admissions tended to be younger than persons under care in each of the three types of programs surveyed. A particularly dramatic finding, however, was the extremely large proportion of children and youth under age 18 in the under care caseload of private psychiatric hospital inpatient programs. Overall, private psychiatric hospitals had larger percentages of children and youth in inpatient care programs than other types of specialty mental health organizations. Residential care programs, specifically RTCs for emotionally disturbed children, were even more focused on children and youth.

Persons with principal diagnoses of schizophrenia and affective disorders comprised fairly large proportions of the caseloads in all three types of programs. Schizophrenia was less frequent in less than 24-hour care programs than in inpatient and residential programs, with the exception of RTCs for emotionally disturbed children. Persons diagnosed with schizophrenia also generally made up larger proportions of the under care populations than of the admissions populations in all three program settings, indicating the tendency for persons with these diagnoses to accumulate as part of the long-term caseloads. State/county mental hospitals and VA medical centers were particularly highly invested in the care of persons diagnosed with schizophrenia.

Differences in characteristics of persons served in the three types of mental health programs and different organization types illustrate potential issues around access and availability of care. It is critical to monitor these types of information about persons actually receiving services as the mental health system continues to evolve over time. This chapter provides a first look at these national data; further analyses are planned that will shed further light on mental health services availability to different subgroups of persons.

FOOTNOTES

1. The term "less than 24-hour care programs" refers to mental health services that are *not* provided overnight; included are outpatient and partial care services provided in organized mental health care settings. Previous client/patient sample surveys collected data separately for the outpatient and partial care programs of specialty mental health organizations.
2. The diagnostic groupings used in Chapter 15 are defined as follows:

Alcohol-related disorders: 291; 303; 305.0.
Drug-related disorders: 292; 304; 305.1–305.9.
Organic disorders: 290; 293; 294; 310; 780.09.
Affective disorders: 296; 298.0; 300.4; 301.11; 301.13.
Schizophrenia: 295; 299.
Personality disorders: 301 (except 301.11 and 301.13); 312.3.
Adjustment disorders: 309 (except 309.21, 309.81 and 309.82).
Attention/conduct/developmental disorders: 312 (except 312.3); 313.81; 314; 315 (except 315.4).

The codes are combined DSM–IV (American Psychiatric Association. (1994). *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.). Washington, DC: Author) and ICD-9-CM (National Center for Health Statistics. (1980). *International Classification of Diseases, Clinical Modification* (9th ed., Vol. I). DHHS Pub. No. (PHS) 80–1260. Washington, DC: U.S. Government Printing Office).

Chapter 16

State Mental Health Agency Controlled Expenditures and Revenues for Mental Health Services, FY 1981 to FY 1997

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Introduction

Mental health is unique in health care because mental illnesses are the only set of disorders for which government actually manages a disorder-specific treatment system. The public mental health system is needed because commercial health insurance usually offers only a limited, "shallow" benefit. The public mental health system serves both as a *safety net* for individuals and as a *safety valve* for an inadequate private sector response to mental illness. Partially because of its unique structure, the scope and shape of the public mental health system is not well understood by many policymakers in health care. Additionally, unlike other governmental health programs (e.g., Medicare), mental health is fundamentally a State responsibility with State government mental health agencies directly controlling the expenditures of more than 16 billion tax dollars (fiscal year [FY] 1997) for mental health services and the joint State-Federal Medicaid program expending a comparable amount each year on mental health services.

Since 1981, the National Association of State Mental Health Program Directors (NASMHPD) and the NASMHPD Research Institute (NRI) have periodically studied the patterns of revenues and expenditures in the public mental health system managed by the 50 State Mental Health Agencies (SMHAs) plus the District of Columbia. This chapter reports on the NRI's latest update of its series of reports on the funding sources and expenditures directly controlled by SMHAs.

This FY 1997 report, completed under contract from the Center for Mental Health Services, documents the expenditures of more than $16 billion for mental health services directly controlled by the Nation's SMHAs, plus the expenditure of several billion additional dollars on public mental health services not directly controlled by SMHAs. This new analysis confirms the continued substantial role of SMHAs in the Nation's system of care for people with mental disorders, and sheds new light on some of the broad trends in this unique sector of health care.

In the past generation, the States have dramatically reformed their mental health systems, and this report confirms that reform has accelerated during the 1990's, despite the SMHAs' limited revenues. The dramatic changes in public mental health systems began in the community mental health era of the 1960's and 1970's. This period witnessed a new emphasis on community care and movement away from State psychiatric hospitals as the primary providers of care and treatment. State reforms became more focused in the 1980's following development of the Community Support Program (CSP) approach. CSP promoted a new understanding of serious mental illness as long-term disorders requiring ongoing but flexible community-based treatment and support services. The CSP approach became the organizing framework for reforms in the States. This era also saw a return of mental health leadership to the States (with President Ronald Reagan's "New Federalism" approach) and better Federal financial support for reform. Significantly, the increased Federal support was not primarily through dedicated mental health programs, but through changes that made Social Security and Medicaid supports more accessible and relevant to people with mental illness. This approach facilitated change, but made the task of managing State systems more complex because of the need to integrate many unrelated Federal and State funding streams.

This report shows how States have accelerated their reforms during the 1990's. SMHA expenditures for inpatient care decreased from 53 percent of all SMHA expenditures in 1990 to 41 percent in 1997. States accomplished this significant shift despite the fact that total SMHA revenues (adjusted for inflation) actually declined 7 percent from 1990 to 1997. SMHAs reduced State hospital expenditures by 29 percent in constant dollars between

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1990 and 1997. By cutting State psychiatric hospital expenditures, SMHAs increased community mental health investment by 86 percent during this same period, an increase of 29 percent above inflation.

The data, however, suggest that there may be limits to what States can do in reform. The fact that overall SMHA revenues have declined precisely during the period that SMHA reforms have increased is sobering. The evidence also suggests that the decline in SMHA revenues resulted from mental health's declining share of overall State expenditures. From 1990 to 1997, SMHA expenditures declined from 2.12 percent to 1.8 percent of overall State government expenditures, a 15 percent decline in mental health's budget clout. This trend means that the reduction in SMHA expenditures relative to inflation is entirely due to a reduction in mental health's share of State revenues. It may be that, due to success in reform, SMHAs are no longer generally viewed as significant problems or priorities within State government. Given a continued pattern of reductions in private mental health coverage and expenditures, this trend is alarming. Recent reports and concerns about individuals with mental illnesses in jails and prisons may signal that the safety net is stretched too thin.

We hope that this latest review of SMHA revenues and expenditures is helpful to policy makers, managers, and advocates in understanding the crucial and evolving role of the States in orchestrating mental health care. In reviewing these results, readers will be impressed by several major continuing trends: (1) the continuing crucial role of SMHA managed services as the Nation's mental health safety net, (2) the continuing variability among the States, (3) the broad scope of changes made by SMHAs during the 1990's (e.g., moving resources from hospitals to communities), and (4) an emerging trend that shows declining SMHA revenues relative to inflation and as a proportion of overall State budgets. These trends all have significant policy implications that will require continued attention in the years ahead.

Method/Sources of Data

This study marks the seventh in a series of reports on the mental health expenditures and revenues directly controlled by all SMHAs. The reports all use the same basic format for compiling data on actual expenditures by SMHAs for mental health services.

The reader should not assume that the expenditures and revenues reported here include all expenditures for or capture all the variability in mental health services within the public mental health system. The responsibilities and organization of mental health services vary significantly from State to State. Many SMHAs fund community care managed by local governments (e.g., county-based organizations) or designated local agencies, while a few directly operate some or all community mental health services. Some States have merged Medicaid funds with SMHA funds to contract for managed mental health care with responsibility for managed care primarily in the SMHA or in the Medicaid agency. These types of organizational and policy variations can account for major differences among States in mental health spending controlled by the SMHA.

Our focus is primarily on the funds for mental health services over which SMHAs have direct managerial control or responsibility. These SMHA-controlled expenditures usually include State general funds, State special appropriations, Federal Mental Health Block Grant funds, Medicaid, Medicare, first-/third-party revenues to SMHA-operated programs such as State psychiatric hospitals, other Federal funds (such as research and demonstration grants), State-required local government "matching" funds, and various first- and third-party funds. Medicaid mental health revenues/expenditures controlled by the Medicaid agency, if different from the SMHA, are not included. Also excluded from the definition of SMHA control are significant funds from non-SMHA sources received by entities that the SMHA may fund but not directly operate. These types of funds may include local mental health revenues and first- and third-party funds received by many community programs, including Medicaid funds that do not flow through the SMHA. By focusing on "SMHA-controlled expenditures," the authors recognize that this report does not depict all mental health spending in a State. However, a valid comparison of the resources directly available to the SMHAs in each State is provided.

The methodology for this effort involved compiling actual (rather than estimated) revenues and expenditures under the direct control of the SMHA. The use of actual rather than estimated figures is a cornerstone of valid and reliable reporting. Without reference to specific financial reports depicting actual expenditures, it is difficult, if not impossible, to both verify figures and have an accessible database for follow-up and/or analysis.

The database that constituted the foundation for the study was predicated on the development and completion of 10 table shells. Based upon revenue and expenditure figures recorded in each State's archival database, dollar amounts reflecting the State's revenues and expenditures were utilized to complete each cell in the tables.

Definitions for the terms contained on the table shells were developed by project staff working with an advisory group of State mental health finance experts and were put into a "glossary" that provided the States and project staff with uniform definitions of terms that corresponded to the row and column headings on the table shells.

Separate tables were used to classify SMHA-controlled expenditures for disability programs other than mental health. States vary in the ways they apportion statutory responsibility for mental health, mental retardation, alcohol abuse, drug abuse programs, and other disability programs. SMHAs that also have responsibility for these other disabilities have expenditures beyond those reflected in the mental health revenue and expenditure tables.

In addition to the compilation of data about mental health expenditures controlled by SMHAs, information was gathered reflecting total expenditures of all community-based programs in the State that receive funds from the SMHA. These figures show the expenditures of all funds received by these programs, including those received from the SMHA and additional funds that are collected directly by the local programs and thus are not under the control of the SMHA. These tables are important, since in many State mental health systems, the local programs may receive more than half of their revenues from sources outside the SMHAs control. In FY 1997, 42 States had information systems that allowed them to supply the information required for these supplemental tables.

Data Compilation and Editing Process

The project utilized two primary means for accumulating and depicting data: (1) analysis and coding of State revenue and expenditure data; and (2) followup discussion with appropriate SMHA officials to clarify items in the State's database, request supplemental budget documents, and/or request review of allocations made to the various table cells. Generally, the following steps were followed to obtain final revenue and expenditure figures:

(1) SMHA staff was contacted and requested to forward FY 1997 revenue and expenditure data archival documents and/or to make initial dollar allocations to cells on the tables and forward these data to the NRI.

(2) SMHA-controlled expenditures were separated into four expenditure classifications for (1) mental health; (2) mental retardation/developmental disabilities; (3) drug programs; and (4) alcohol programs.

(3) The net expenditure figures (representing only mental health programs) were then separated into administrative auspice and service/activity categories. Mental health-related expenditures and revenues data were depicted by three major auspices: State psychiatric hospitals, community-based programs, and State central office services.

(4) For States that could report information on the total expenditures of programs that they funded but did not operate, the total community revenues and expenditures representing both the funds under the control of the SMHA and additional revenues received directly by these community-based programs that were funded by the SMHA were completed using tables that portray the total expenditures and revenues of these programs.

(5) Following preliminary completion and/or review of the data tables by NRI project staff, the data tables, footnotes, glossary, and cover letter (including special questions and notes) were sent to each State SMHA contact person and SMHA director. These persons were requested to respond to any questions and verify the data tables.

(6) Following feedback from the SMHA, project staff entered the verified data in the NRI computer for storage, retrieval, and analysis.

(7) A draft report showing preliminary results from all 50 States was sent to each SMHA director and SMHA contact person for their final review and corrections before the final report was published.

The close relationship between the NRI and each SMHA was particularly important for conducting the study. Any project seeking to account for literally billions of dollars could not achieve an accurate portrayal of such funds in the absence of dialogue between project staff and SMHA contact persons. This dialogue (via letter, e-mail, fax, and phone) served to ensure the data received from SMHAs were accurate and as complete as possible. Data for some cells in the tables could not be obtained. Some SMHAs did not have an accounting system for FY 1997 that portrayed the allocation of revenues/expenditures using the Project's glossary and table formats.

Findings

Overall Trends in SMHA-Controlled Expenditures for Mental Health Services

In FY 1997, SMHAs directly controlled the expenditures of more than $16 billion for mental health services to individuals with mental illnesses (Figure 1). This is an increase of 14 percent from FY 1993 SMHA-controlled mental health expenditures and an overall increase of 33 percent since FY 1990. However, when SMHA-controlled expenditures are adjusted for inflation, expenditures decreased 2.2 percent since FY 1993 and are down more than 7 percent from FY 1990. Over the 17-year period from FY 1981 to FY 1997, SMHA expenditures increased 164 percent in current dollars, but decreased by 7 percent in inflation adjusted "constant" dollars, due entirely to the decline in constant dollar funding during the 1990's.

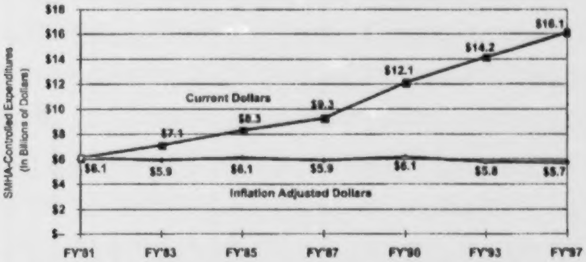

Figure 1. Trends in state mental health agency controlled expenditures for mental health services, FY 1981 to FY 1997

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Shifting Funds From State Psychiatric Hospital Inpatient Services to Community-Based Mental Health Programs

Despite the relatively flat level of inflation-adjusted SMHA expenditures for mental health services described above, a major shift in the types of services funded by SMHAs has occurred. This study documents the progress over the past 35 years in building comprehensive community mental health systems and reducing the role of State psychiatric hospitals. State mental health systems are now spending substantially more on community services than institutional services. In FY 1997, States spent significantly more on community mental health services (56 percent) than on State psychiatric hospitals (41 percent). The pattern of overall public mental health spending shows an even more substantial preference for community spending, as most non-SMHA controlled resources spent entirely on community care.

As Figure 2 shows, this is a major change in the allocation of resources from earlier years. In FY 1981, community mental health programs received only 33 percent of SMHA-controlled expenditures, while State psychiatric hospital inpatient services accounted for 62 percent. In FY 1993, the previous report on SMHA spending documented that expenditures for community programs matched or slightly exceeded State psychiatric hospital inpatient spending for the first time. This trend toward community services accelerated over the past 4 fiscal years as SMHA substantially increased spending on community mental health services by $2.1 billion or 31.1 percent from FY 1993 to FY 1997. SMHAs now control the annual expenditure of nearly $9.1 billion to provide community-based mental health services to persons in need.

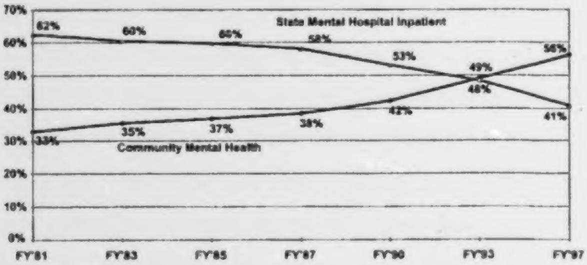

Figure 2. State mental health agency controlled expenditures for state psychiatric hospital inpatient and community-based services as a percentage of total expenditures: FY 1981 to FY 1997

In FY 1997, SMHAs expended almost $6.6 billion on inpatient services in State psychiatric hospitals, an actual dollar decrease of $266 million (3.9 percent) from FY 1993 levels. This is the first documented decrease in State psychiatric hospital spending after years of slowing growth. When State psychiatric hospital spending is controlled for inflation, State psychiatric hospitals decreased by 17.5 percent from FY 1993 to FY 1997, while inflation-adjusted community mental health expenditures increased 12.6 percent over this period. The decrease in State expenditures for State psychiatric hospital inpatient services is consistent with the findings of the NRI's State Mental Health Agency Profiles System, which has documented the closing or merger of 40 State psychiatric hospitals during the 1990's, and the Center for Mental Health Service's Annual Census of State and County Psychiatric Hospitals, which found a 39 percent reduction in psychiatric hospital residents between 1990 and 1997.

A Continuing Pattern of State and Regional Variation

The $16.1 billion in expenditures controlled by SMHAs in FY 1997 amounted to over $60.59 for every civilian resident in the United States that year. The median State—the point at which 25 States were above and 25 States were below—was Missouri, with expenditures of $56.38 per capita in FY 1997. However, as Figure 3 demonstrates, a wide variation occurred among States in their SMHA-controlled spending. In FY 1997, SMHA-controlled expenditures varied from more than $112 in New York to a low of $23 in Tennessee. These examples of variance in revenue and expenditure patterns are linked to the wide variability in organizational pattern and structures among the States. One of the reasons Tennessee's overall SMHA spending appears low, for example, is that most mental health resources in Tennessee have been assimilated into a managed care effort controlled by the State's Medicaid program, and therefore these resources are not part of the SMHA budget. Tennessee's State Medicaid agency expended over $320 million in FY 1997 for mental health services provided by its behavioral health waiver.

An analysis of relationship between the geographic region of the country in which a State is located was conducted to reduce some of the wide variation in State mental health expenditures. For example, Figure 4 shows that the States with the highest expenditures are concentrated in the northeastern and northwestern regions of the country, while States in the southern part tend to spend the least. One historical cause of these patterns is that State psychiatric hospitals developed in the 19th century, in the more populated States (especially those east of the Mississippi River). Since a significant portion of resources now devoted to community mental health care has been reallocated from State psychiatric hospitals, and since the data tend to suggest a reluctance of State legislatures to significantly increase funds for mental health, higher resource levels have persisted in States that developed State psychiatric hospital structures earlier.

Table 1 displays regional averages for mental health spending. This table shows that SMHAs in New England ($91.07) and Mid-East ($90.37) have the highest per capita expenditures for mental health, while States in the South Atlantic ($50.08) and South Central ($38.53) regions have the lowest per capita expenditures. In the Northeast and Mid-East regions, every State in the region has per capita expenditures for mental health above the U.S. average, while every State in the South Central region has per capita expenditures below the U.S. average.

Although considerable variability exists in SMHA spending, there is also a pattern of reduced variation among the States within geographic regions. For historic, political, and cultural reasons, patterns of revenues and expenditures within regions are more comparable, and perhaps provide a better basis for comparisons. These regional analyses demonstrate the importance of looking at a State's mental health expenditures within the context of its region. In the Northeast and Mid-East regions, every State in the region has per capita expenditures for mental health above the U.S. average, while every State in the South Central region has per capita expenditures below the U.S. average.

Regional trends also exist regarding the level of SMHA-controlled expenditures for mental health services dedicated to community mental health services or State psychiatric hospital-inpatient services. Figure 5 shows the percentage of SMHA-controlled mental health expenditures for community mental health services. This map shows that most of the States with a high percentage of their SMHA expenditures devoted to community mental health care tend to be located in the western half of the country. States in the South Atlantic (51 percent), South Central (50 percent), and Mid-East (48 percent) regions have the highest expenditures on State psychiatric hospital inpatient services. States in the Mountain (72 percent), Far West (72 percent), New England (62 percent), and Great Lakes (60

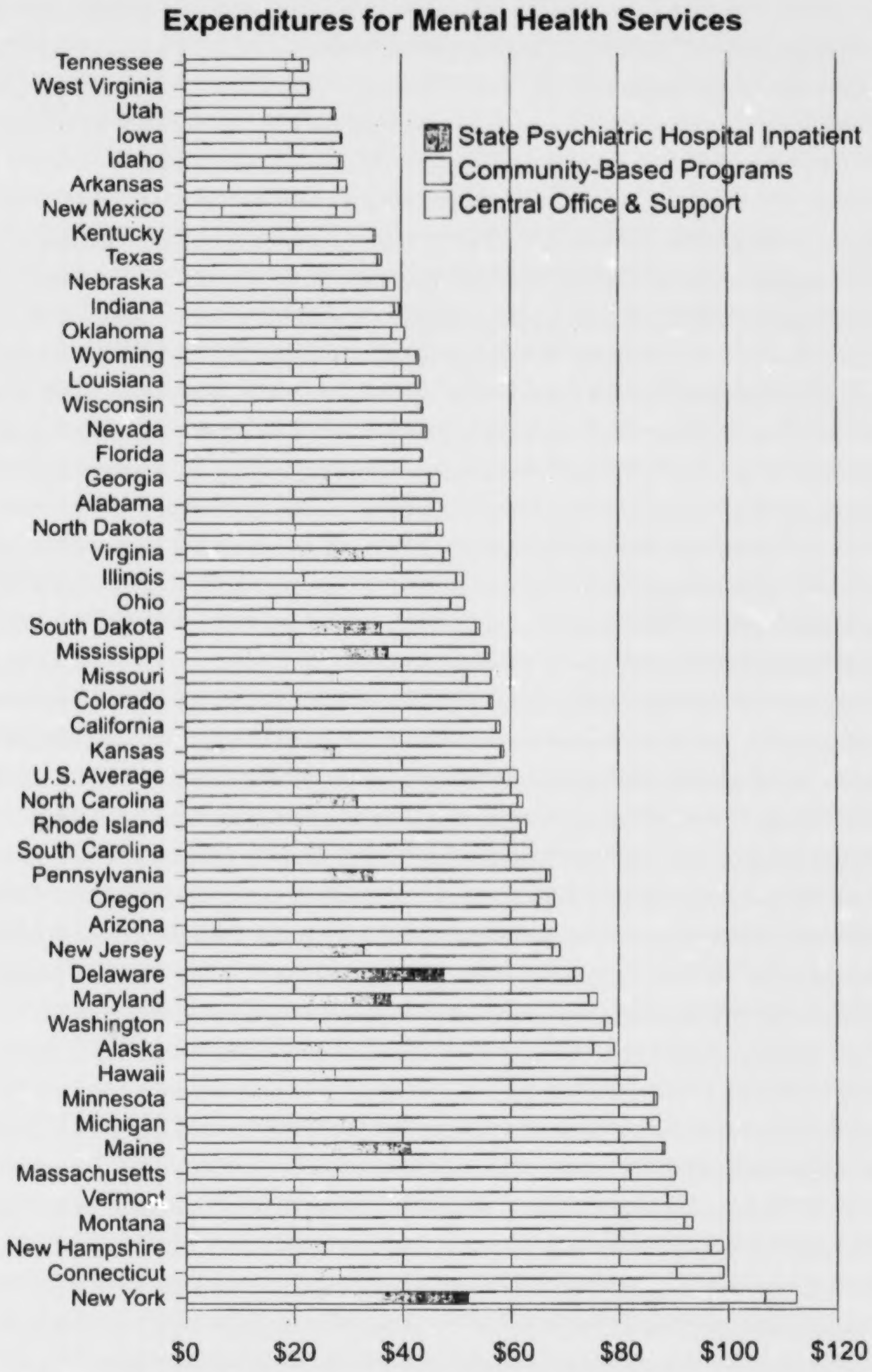

Figure 3. FY 1997 SMHA-controlled per capita

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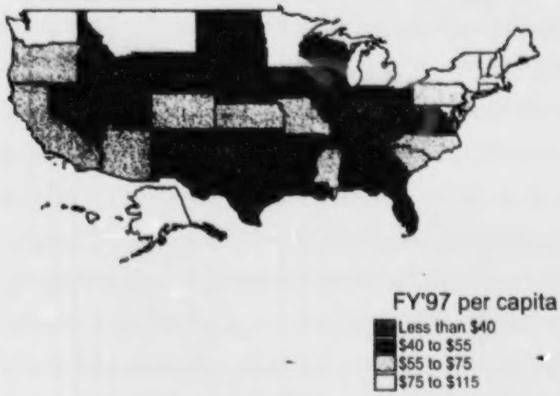

Figure 4. Total FY 1997 SMHA-controlled per capita mental health expenditures

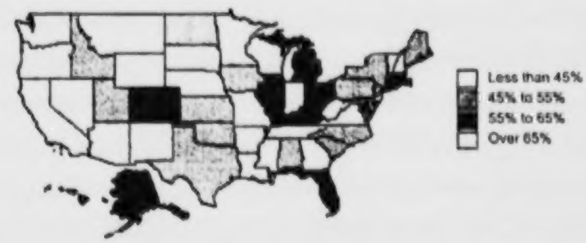

Figure 5. FY 1997 percent of SMHA-controlled mental health expenditures for community mental health services

Table 1: SMHA-controlled per capita mental health expenditures by region

REGIONS	State Psychiatric Hospital Inpatient		Community-Based Programs		Support Activities/ Admin		Total	FY 93–97 Percent Change
	Amount	Percent	Amount	Percent	Amount	Percent		
New England	$28.02	31%	$56.74	62%	$6.31	7%	$91.07	14.2%
Mid-East	$43.81	48%	$43.52	48%	$3.03	3%	$90.37	–5.9%
Far West	$16.37	26%	$44.37	72%	$1.13	2%	$61.87	21.1%
Great Plains	$25.40	44%	$31.16	53%	$1.70	3%	$58.26	34.3%
Great Lakes	$21.36	38%	$34.01	60%	$1.58	3%	$56.95	21.4%
Mountain	$13.51	26%	$37.85	72%	$1.42	3%	$52.79	42.6%
South Atlantic	$25.42	51%	$23.47	47%	$1.18	2%	$50.08	25.0%
South Central	$19.45	50%	$18.14	47%	$0.95	2%	$38.53	17.2%
U.S. AVERAGE	$25.14	41%	$34.47	57%	$2.73	4%	$60.83	14.2%

percent) regions all expend more than 60 percent of their SMHA-controlled funding on community-based programs.

Figure 6 shows that States in the New England and Mid-East regions of the United States tend to spend more than average on both hospital and community mental health services, while States in the South Central region spend less than average on both State psychiatric hospital and community mental health services. States in the Far West and Mountain regions tended to expend more than average on community-based services and less than average on State psychiatric hospital inpatient expenditures.

An analysis of regional differences in trends also helps explain variations among States in the growth of mental health spending. Figure 7 shows that although SMHA-controlled mental health

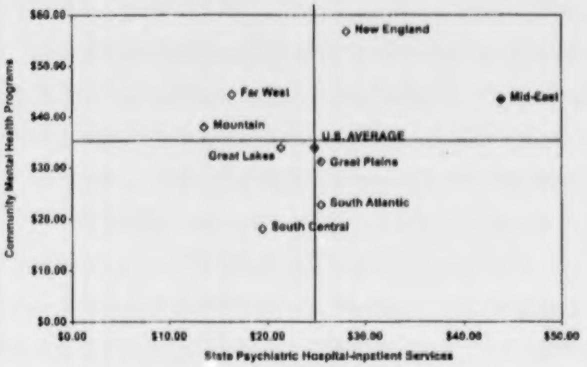

Figure 6. FY 1997 per capita state mental health agency controlled expenditures for mental health services, by type of program

expenditures increased by 14.2 percent from FY 1993 to FY 1997, there was significant regional variation. States in the Mountain (42.6 percent), Great Plains (34.3 percent), and South Atlantic (25.0 percent) regions experienced the highest increase in expenditures, while States in New England (16.7 percent) and the Mid-East (–5.9 percent) had either low increases or experienced actual decreases. The regions that showed the largest growth in mental health spending (Mountain, Great Plains, and South Atlantic) are among the regions of the United States that had the lowest per capita spending in prior NRI studies of State mental health agency expenditures.

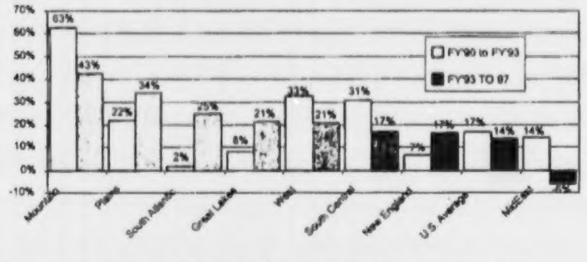

Figure 7. Change in SMHA-controlled mental health expenditures, FY 1990 to FY 1997 by region

Forensic Mental Health Trends

Spending on forensic mental health service varies substantially across the States. Forensic services are mental health services provided to persons directed into treatment by the criminal justice system and can include either mental health treatment or a mental health evaluation from the mental health system. In several States, the SMHA is not responsible for any forensic services, since these services are provided by the State corrections agency and local jails. However, in States such as the District of Columbia, Maryland, Missouri, Ohio, Wisconsin, and Wyoming, forensic-related expenditures account for over 14 percent of their total mental health spending.

In FY 1997, 39 States were able to report SMHA-controlled expenditures for forensic mental health services. In these States, forensic services accounted for over $1.1 billion or 7.1 percent of total SMHA-controlled expenditures, as shown in Figure 8.

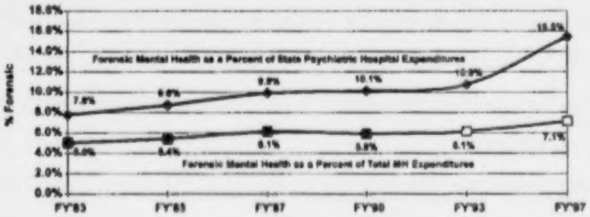

Figure 8. SMHA-controlled forensic mental health expenditures, FY 1983 to FY 1997

Expenditures for forensic mental health services increased by 64 percent from FY 1990 to FY 1997, almost twice as fast as overall SMHA-controlled mental health expenditures (up 33 percent). Since FY 1983, forensic expenditures have increased by 231 percent, nearly twice the increase in total SMHA mental health spending (126 percent). Almost all reported forensic service expenditures were provided in State psychiatric hospitals (96 percent). Among State psychiatric hospitals, forensic service expenditures now account for 17 percent of total mental health expenditures.

An increasing portion of all forensic expenditures is devoted to the provision of mental health services to persons either convicted or charged with sex offenses. In FY 1997, seven States reported that more than $32.7 million was expended to provide mental health services to sexual offenders. Future versions of this expenditure series will track the development and growth of expenditures of mental health services for sexual offenders.

SMHA-Controlled Expenditures by Type of Mental Health Service

In addition to describing State mental health expenditures for State psychiatric hospitals and community programs, this report details expendi-

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tures by the specific types of services provided in both hospital and community settings. SMHA-controlled expenditures are depicted by inpatient, residential, ambulatory (including case management, outpatient, partial day, and emergency), and prevention services. Figure 9 shows how SMHA-controlled expenditures for specific services have increased over time.

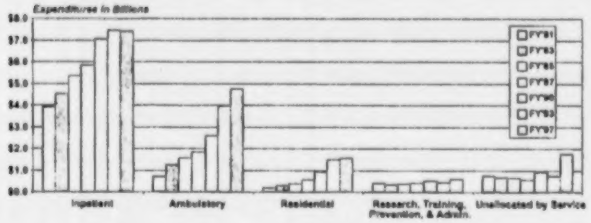

Figure 9. FY 1981 to 1997 SMHA-controlled expenditures for mental health services, by type of service

Ambulatory mental health services have increased to $4.8 billion in FY 1997 and now represent 30 percent of total SMHA-controlled spending, an increase from 12 percent of spending in FY 1981. SMHAs' controlled expenditures of $1.6 billion in FY 1997 for residential mental health services, such as group homes, supported housing, and other 24-hour non-inpatient care. Expenditures for residential services have increased substantially to 10.1 percent of total expenditures in FY 1997, up from 3 percent in FY 1981.

SMHA-controlled expenditures for inpatient service expenditures decreased slightly to $7.4 billion in FY 1997. Although inpatient services remain the largest single type of service expenditures of SMHAs, inpatient expenditures have dropped from 65 percent of total SMHA spending in FY 1981 to 46 percent in FY 1997.

SMHA expenditures for administration, research, and training were $621 million in FY 1997. SMHA administration, research, and training expenditures as a percentage of total SMHA expenditures have decreased from 7 percent in FY 1981 to 4 percent in FY 1997. Due to constraints in reporting of mental health service expenditures by community mental health providers, almost 11 percent of State spending could not be allocated between inpatient, residential, and ambulatory services.

Ambulatory mental health services include a broad array of community-based services that are delivered in nonresidential and non-inpatient settings. In FY 1997, ambulatory expenditures totaled $4.76 billion. This report documents that ambulatory expenditures consist of outpatient services of $2.63 billion (55 percent of ambulatory expenditures), partial care/day-treatment services of $491 million (10 percent of ambulatory expenditures), case management services of $865 million (18 percent of ambulatory services), emergency services of $361 million (8 percent of ambulatory expenditures), and "unallocated ambulatory" services of $332 million (7 percent of ambulatory expenditures).

State psychiatric hospitals provide a variety of mental health services including inpatient services (91 percent), residential services (2 percent), outpatient services (1 percent), and other ambulatory services (4 percent). In FY 1997, more than $367 million of ambulatory services were provided by State psychiatric hospitals that operated outpatient and other ambulatory services. In several States, the ambulatory services provided by State psychiatric hospitals represent substantial portions of their total State psychiatric hospital expenditures—New York (24 percent), New Mexico (21 percent), Ohio (14 percent), and South Carolina (7 percent). In some States, these ambulatory programs are provided by State psychiatric hospital staff working in outpatient clinics located off the hospital grounds.

Community mental health programs also provide a wide range of mental health services including inpatient services (9 percent), residential services (17 percent), prevention services (2 percent), and various ambulatory services (52 percent) which include case management (10.2 percent), outpatient (31.2 percent), partial/day programs (5.8 percent), and emergency (4.2 percent). Due to limitations in the ability of some States to report on community mental health service expenditures, 21 percent of community service expenditures were not able to be allocated to specific services.

Several States have reduced their State psychiatric hospital system and instead fund large amounts of inpatient services through their "community" mental health system—Kentucky (40 percent), New Jersey (35 percent), Florida (27 percent), Illinois (26 percent), Oklahoma (25 percent), Louisiana (24 percent), Minnesota (22 percent), and Wisconsin (20 percent). Community mental health programs in these States may provide inpatient services within community mental health centers, or purchase inpatient services from general hospitals or other (non-State-operated) psychiatric hospitals.

SMHA-Controlled Expenditures for Psychiatric Medications and New-Generation "Atypical" Antipsychotic Medications

New pharmacological agents are being effectively used by SMHAs to treat mental illnesses. However, many of the new-generation medications are substantially more expensive than earlier ones. Most medication costs for individuals with serious mental illness are covered by the Medicaid program and are not reflected in SMHA budgets. However, SMHAs are usually responsible for medication costs in State psychiatric hospitals, and many States have established programs to cover medication costs especially for individuals not eligible for Medicaid.

In FY 1997, we began compiling information on the expenditures by SMHAs for medications. In this initial compilation effort, 32 States were able to report expenditures totaling nearly $165 million (1.9 percent of total spending) for these medications. Spending for medications in State psychiatric hospitals accounts for 2.5 percent of total State psychiatric hospital expenditures.

An area of particular interest to many States and mental health advocates involves the use of new-generation "atypical" antipsychotic medications for persons with schizophrenia. Twenty States were able to report expenditure data totaling $45 million for the new-generation atypical antipsychotic medications. (Atypical medications include clozaril, olanzapine, risperidone, and quetiapine). Expenditures for atypical antipsychotic medications were depicted for State psychiatric hospitals ($22 million in 18 States) and community programs ($25 million in 14 States). One percent of State psychiatric hospital budgets was expended on these medications in the 18 States that were able to report this data.

SMHA-Controlled Mental Health Spending Is Declining in Constant Dollars and in Relation to Other State Government Expenditures

Although total SMHA-controlled expenditures for mental health have increased over time, mental health spending has not kept pace with other governmental spending or with inflation. When SMHA-controlled expenditures were examined, controlling for the effects of inflation, 20 States reported that their total SMHA-controlled mental health expenditures have failed to keep pace with inflation since FY 1993. Nationally, inflation adjusted SMHA-controlled mental health expenditures decreased 2 percent from FY 1993 and have fallen 6.6 percent since FY 1981.

Figure 10 shows that the percentage of total State government expenditures devoted to the State mental health agencies has decreased over the past 15 years. In FY 1981, SMHA-controlled expenditures for mental health represented 2.09 percent of total State government spending. However, since FY 1983, SMHA expenditures have steadily decreased as a percentage of total State government expenditures; in FY 1997, they represented only 1.81 percent of State government expenditures. If SMHAs had maintained the same level of State contribution at 2.14 percent that they received in FY 1983, they would have received approximately $3 billion more in FY 1997 than they actually received.

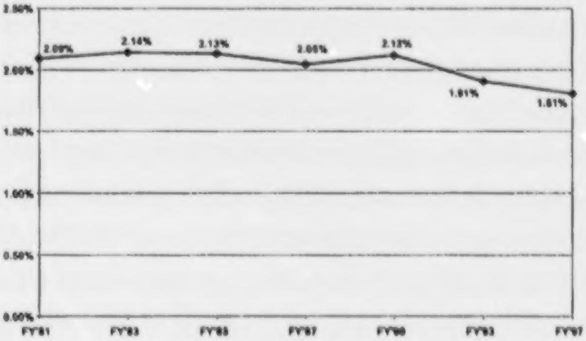

Figure 10. Total SMHA-controlled mental health expenditures as a percentage of total state government expenditures, FY 1981 to FY 1997

During the same period that SMHA-controlled mental health expenditures decreased within overall State spending, SMHAs also decreased when compared to other State health and welfare and State corrections expenditures. Figure 11 shows that the growth in State government expenditures for corrections and for other health and welfare programs has consistently outpaced State mental health agency spending throughout the past 15 years. For the 9-year period from FY 1981 to FY 1990, while SMHA-controlled mental health expenditures increased by 99 percent, State expenditures on corrections increased by 239 percent, and State health and welfare expenditures increased 105 percent.

During the 1990's, SMHA-controlled mental health resources have decreased even more com-

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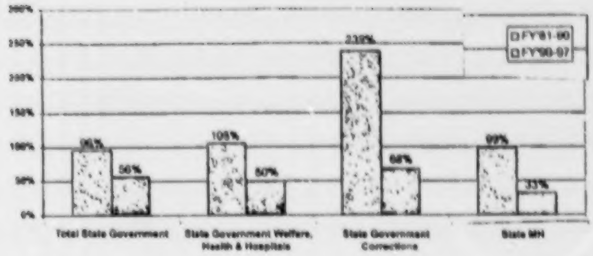

Figure 11. Growth in state government expenditures, FY 1981 to FY 1997

pared to other State expenditures. From FY 1990 to FY 1997, SMHA-controlled expenditures for mental health increased by 33 percent, while other State government programs increased more quickly. From FY 1990 to FY 1997, corrections expenditures increased by 68 percent, State health and welfare expenditures increased by 50 percent, and total State government expenditures (for all services) increased by 56 percent.

These trends may raise significant policy and political concerns. First, they may suggest that the increased efficiency of reorganizing mental health toward community care may have had a negative effect on funding. Second, since community care is often a local responsibility, these data may suggest a cost shift for mental health responsibility from the State to local government in some States.

SMHA-Controlled Funding Sources for Mental Health Services

In FY 1997, SMHAs reported that they controlled or expended more than $16.35 billion for mental health services. As Figure 12 shows, State government's tax revenues contributed more than $11.4 billion (69 percent) of the cost of SMHA-controlled services. The Federal Government, mostly via Federal Medicaid participation, contributed $4 billion (25 percent), first- and third-party payments contributed $822 million (5 percent), and local government (county and city governments) contributed over $95 million (1 percent) of SMHA-controlled mental health revenues.

The State governments' contribution of over $11.4 billion for SMHA-controlled mental health services in FY 1997 came mostly from State general funds of $8.6 billion (60 percent of total funds) in FY 1997. State Medicaid funds used to match the Federal Medicaid program accounted for another $1.5 billion (9 percent), and other state funds accounted for an additional $1 billion of the State mental health contribution. From FY 1993 to FY 1997, State government revenues for mental health increased by $808 million, an increase of 7.6 percent. From FY 1981 to FY 1997, State government contributions to SMHA-controlled mental health services increased by $6.4 billion (129 percent).

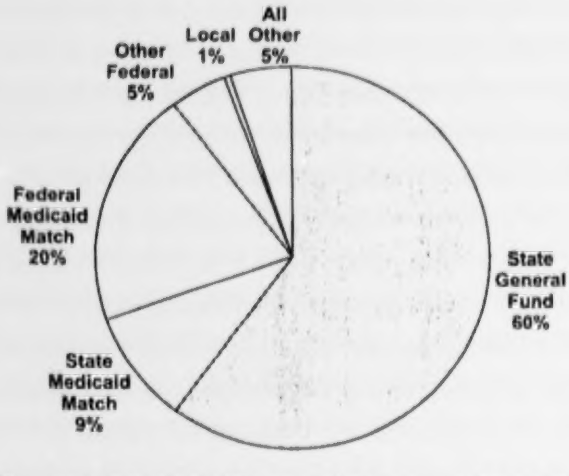

Figure 12. FY 1997 SMHA-controlled revenues for mental health services

Federal Government funding sources provided 25 percent of all funds expended by SMHAs in FY 1997. Most Federal funds controlled by SMHAs originated from the Medicaid program, which expended over $3.26 billion (20 percent of total SMHA funds) on mental health services at either SMHA-operated or -funded programs. This represented an increase of more than $1 billion from FY 1993 to FY 1997 (Figure 13). Among SMHA revenue sources, Medicaid again had the largest increase of any funding source (up 48 percent). However, it is important to note that these data on Medicaid represent only those Medicaid funds that are "controlled" by the SMHAs. An additional $850 million of Medicaid goes to community mental health programs in 42 States where the SMHA does not administratively "control" the Medicaid revenues (i.e., community mental health providers contract with the State Medicaid agency). Additionally, this study does not account for additional Medicaid payments for mental health services to the many providers and health plans that are not funded by SMHAs, such as Medicaid HMOs, private psychiatric hospitals, most general hospitals, and private mental health professionals such as psychiatrists, psychologists, social workers, and other providers.

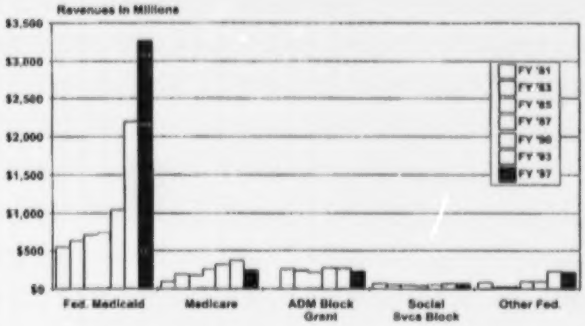

Figure 13. FY 1981 to 1997 SMHA-controlled revenues from Federal government sources for mental health services

In analyzing the major funding sources of State psychiatric hospitals, State government sources accounted for 69 percent ($4.9 billion), while Federal sources accounted for 25 percent ($1.77 billion), first-/third-party and other funds accounted for 6 percent ($402 million), and local government funds accounted for 1 percent ($56 million).

The major sources of SMHA-controlled funds for community mental health programs were similar to the State psychiatric hospital funding sources: State governments contributed 69 percent ($6.1 billion), while Federal sources accounted for 26 percent ($2.2 billion).

In FY 1997 the major sources of Federal funds controlled by SMHAs for community mental health programs were Medicaid at 79 percent ($1.76 billion) and the Mental Health Services Block Grant (MHBG) at 10 percent ($232 million). The major sources of Federal funds at State psychiatric hospitals were Medicaid at 84 percent ($1.5 billion) and Medicare at 12 percent ($219 million).

Since Medicaid is the second largest source of funds to SMHAs, States were asked to report which Medicaid options or waivers were used to draw their revenues. Out of a combined total of $4.46 billion State and Federal Medicaid revenues in FY 1997, $841 million (19 percent) came from the rehabilitation option, $451 million (10 percent) was for services under the Inpatient-under Age 21 Option, $375 million (8.4 percent) was for the 1915(b) waiver, $239 million (5.4 percent) was for inpatient services for persons over age 65, $234 million (5.2 percent) was for Clinic Option services, and $114 million (2.6 percent) was for COBRA Case Management mental health services. Approximately $980 million (22 percent) was not allocated to any specific Medicaid option or service.

Mental Health Block Grant Expenditure Trends Over Time

Since the MHBG was created in 1982, it has been an important source of flexible funding for SMHAs to pilot and implement innovative community mental health services. SMHAs have used MHBG funds to develop and implement supported housing, supported employment programs, case management, consumer-run services, assertive community treatment, and other comprehensive community support systems. Successful programs initiated using MHBG funds frequently are expanded and funded using State general revenues or local revenues. Since the passage of the MHBG, SMHA expenditures for community mental health services have increased by more than $7 billion (an increase of almost 350 percent).

Congressional appropriations for the MHBG have not kept pace with the increases in SMHA-controlled spending on community mental health services. Since passage of the MHBG, funding has increased only slightly (up 17 percent) from FY 1983 to FY 1997, but in inflation-adjusted dollars, MHBG expenditures have decreased by 49 percent. As a result of the relatively flat Federal funding of the MHBG during a time of unprecedented State spending increases in community mental health programs, the MHBG (which in FY 1983 represented 10.7 percent of SMHA-controlled community mental health expenditures) represented 2.8 percent of SMHA-controlled community expenditures in FY 1997 (Figure 14). The reported expenditures of MHBG funds by SMHAs differ slightly from the Federal Block Grant allotments to States since actual expenditures include "carryover" of funds from one year to another. In FY 1999, Congress appropriated an additional $13.4 million to the MHBG. This and subsequent proposed increases will be reflected in future reports.

Total Expenditures of SMHA-Funded Community Mental Health Programs

In addition to the data on SMHA-controlled expenditures and revenues described above, this study also compiled information from the States regarding the total expenditures of the programs that the SMHA funds. These tables show both the SMHA-controlled expenditures discussed above and all other expenditures and revenues of these programs.

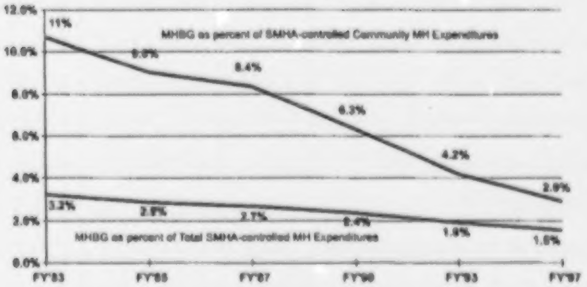

Figure 14. SMHA expenditures of the mental health block grant as a percentage of total SMHA-controlled mental health expenditures and community-based mental health expenditures: FY 1983 to FY 1997

Forty-two SMHAs were able to report FY 1997 data for these community expenditures. Using this broader picture of community mental health expenditures, a total of $11.2 billion was expended in FY 1997 by community mental health programs funded by SMHAs. About 65 percent ($7.3 billion) of the total community expenditures were "SMHA-controlled" and 35 percent ($3.9 billion) were additional funds not counted as SMHA-controlled.

As Figure 15 shows, with the addition of these additional community mental health expenditures, total community mental health expenditures of these 42 SMHAs represented 63 percent of mental health expenditures, while State psychiatric hospital inpatient expenditures dropped to 35 percent. The amount of additional community expenditures, determined by counting "non-SMHA-controlled" expenditures, varied by State. Some States (such as Delaware, Hawaii, Idaho, Montana, Nevada, and South Carolina) operate almost all community programs with State employees, and thus have almost no funds that are not controlled by the SMHA. Other States show major increases in their community mental health system when these additional expenditures are included (Iowa [83 percent of community expenditures were "not-controlled by the SMHA"], Indiana [71 percent], Utah [73 percent], Arkansas [67 percent], Nebraska [65 percent], and New York [57 percent]).[1]

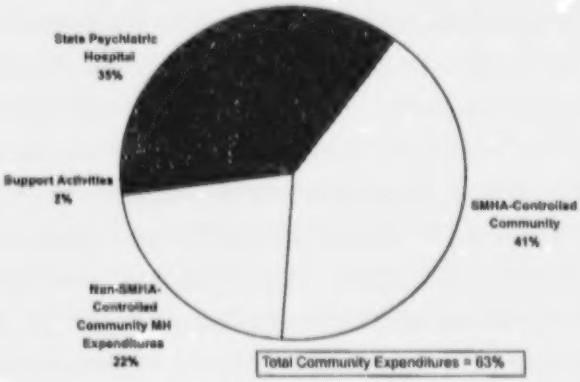

Figure 15. FY 1997 total expenditures of SMHA-funded or -operated mental health programs

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[1] For further information about this study please contact Ted Lutterman, Director of Research, at the NASMHPD Research Institute by phone at (703) 739-9333 ext. 21 or e-mail at or mail to NRI, 66 Canal Center Plaza, Suite 302, Alexandria, VA 22314. Expenditure and Revenue data for individual States from this report are available on the NRI website at www.nasmhpd.org/nri.

Chapter 17

The 16-State Indicator Pilot Grant Project: Selected Performance Indicators and Implications for Policy- and Decisionmaking

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[*]*Substance Abuse and Mental Health Services Administration / Center for Mental Health Services;* [†]*Colorado Mental Health Performance Indicator Grant;* [‡]*Vermont Multi-State Performance Indicator Grant;* [§]*Indiana Performance Indicator Pilot Study;* [+]*Rhode Island State Performance Indicator Pilot;* [#]*New York State Indicator Pilot Project;* [**]*Oklahoma Mental Health Indicator Pilot Project;* [††]*Illinois Performance Indicator Pilot Project;* [‡]*Washington State Indicator Pilot Grant: Using Performance Indicators to Shape Quality Mental Health Services*

Introduction

The purpose of this article is to examine selected performance indicators in the 16-State Indicator Pilot Grant Project (hereafter, 16-State Project), highlighting policy- and decisionmaking implications of performance indicator findings. The 16-State Project is funded by the Center for Mental Health Services (CMHS), Substance Abuse and Mental Health Services Administration, in a collaboration of the Survey and Analysis Branch and the State Planning and Systems Development Branch, Division of State and Community Systems Development. Sixteen States have been awarded grants for a 3-year period (fiscal years 1999–2001) to pilot performance indicators that were selected in the CMHS-funded 5-State Feasibility Study (NASMHPD Research Institute, 1998) and the 1998 National Association of State Mental Health Program Directors' Framework of Mental Health Performance Indicators (NASMHPD President's Task Force, 1998).

The primary goal of the project is to pilot and implement these indicators so that they can be collected and reported across States' information systems. The specific aims of the grant are (1) to collect specific performance indicators that can be reported comparably across States for national reporting and (2) to facilitate planning, policy formulation, and decisionmaking at the State level. Additionally, 6 of the 32 performance indicators are tied to the Federal Government Performance and Results Reporting Act (GPRA) as core measures for State reporting. The grant also supports the involvement and participation of key stakeholders, including consumers and family members, at all stages of the grant process. The 16 State grantees are Arizona, Colorado, Connecticut, Illinois, Indiana, Missouri, New York, Oklahoma, Rhode Island, South Carolina, Texas, Utah, Vermont, Virginia, Washington State, and the District of Columbia.

Background

The 16-State Project conforms to historical developments and contributions of the Mental Health Statistics Improvement Program (MHSIP), which began in the 1970's. An MHSIP document, ***FN10 Data Standards for Mental Health Decision Support Systems*** (Leginski et al., 1989), together with subsequent grants to States, initially enabled the State mental health agencies to implement data standards in the areas of organization, patient/client, event, human resources, and financial data; facilitating standardization; and capacity building of State management information systems. The standards were broadly conceived to support decisionmaking in the mental health system. A second development in 1996, the MHSIP Consumer-Oriented Mental Health Report Card, identified performance measures in the domains of access, quality/appropriateness, outcome, and prevention to be used for assessing the effectiveness of mental health services. The MHSIP consumer survey was made part of the report card to include a consumer assessment of these same domains. Since 1996, 45 States have been awarded MHSIP State Reform Grants to further integrate, synthesize, analyze, and use information based upon the MHSIP Report Card. Grant-funded system changes serve as a foundation for State data integration and performance monitoring activities.

In 1997, CMHS funded five States—South Carolina, Massachusetts, Illinois, Texas, and Colorado—to identify and pilot performance indicators that would not only be feasible and meaningful to collect, but that could be compared across States. Using the MHSIP Report Card and other sources, 28 performance indicators were selected and piloted using the domains of access, quality/appropriateness, outcome, and plan/management. The major finding of this project was that the States would be able to collect and report the selected indicators on a comparable basis if given sufficient time and resources. In 1998, the National Association of State Mental Health Program Directors (NASMHPD) incorporated the results of the 5-State Study into the development of the NASMHPD Framework of Mental Health Performance Indicators. It is this refined framework of 32 indicators that is being used by the 16-State Project (table 1).

Table 1. State indicator pilot grant performance indicators (by domain)

Access

Penetration/Utilization Rates
Consumer Perception of Access

Quality/Appropriateness

Consumer Participation in Treatment Planning
Consumers Linked to Primary Health Services
Contact Within 7 Days Following Hospital Discharge
Consumer Perception of Quality/Appropriateness
Adults Receiving Assertive Community Treatment
Adults in Supported Employment
Adults in Supported Housing
Adults Receiving New-Generation Atypical Medications
Children Receiving Wraparound or In-Home Services
Family Involvement in Treatment for Children/Adolescents
Readmission Within 30 Days/180 Days—State Hospital
Seclusion
Restraint
Medication Errors

Outcomes

Consumer Perception of Outcomes
School Improvement—Children
Employment—Adults
Level of Functioning
Symptom Relief
Consumer Injuries
Elopement
Children With Placements in 24-hour Supervised Treatment Programs
Health Status/Mortality
Recovery/Hope/Personhood
Reduced Substance Abuse Impairment
Living Situation, Including Homeless
Involvement in the Criminal Justice System

Structure/Plan Management

Consumer/Family Member Involvement in Policy, Quality Assurance, and Planning
Average Resources Spent for Mental Health

Status of Project

The major focus of the 16-State Project is to pilot and implement performance indicators across States and to find the best ways to report these data. In addition to the performance indicators collected, additional data collection includes subgroup information on age (including children), race/ethnicity, gender, and diagnoses for hospital as well as community service settings. Some indicators focus on only adults or children, as appropriate. In the project, the States are addressing complex issues of performance indicator development and comparability as well as the need for collecting and reporting quality data.

This article selects specific indicators from the 16-State Project to address their policy and decisionmaking implications. Preliminary results of the project and the potential of these findings for guiding policy and decisionmaking are reviewed. Each performance indicator will be introduced and discussed in terms of (1) background and data collection issues and (2) use of this information in policy- and decisionmaking. Several performance indicators have been selected for discussion in this article: indicators from the MHSIP consumer survey; penetration/utilization rates; assertive community treatment and supported employment services; use of atypical medications; number of days until readmission to a State mental hospital; days elapsed until contact by a provider for persons who have been discharged from a hospital; level of functioning and symptoms; and cost. Authors of these sections have taken responsibility for compiling grantees' data for the performance indicators about which they have written. Each author will introduce the indicator, provide background and significant information related to data collection issues, and present an analysis of the indicator's potential for use in policy- and decisionmaking. Performance indicators will be presented in the order of the 16-State Project domains: access, quality/appropriateness, outcome, and plan management—with the exception of the consumer survey indicators, which address three of these domains and which will be presented first.

Performance Indicators in the MHSIP Consumer Survey

Introduction and Background

Many of the indicators being reported in the 16-State Project are based on encounter data, clinician reports, or objective measures such as employment, living situation, or contact with the legal system. The inclusion of indicators based on consumer perspectives illustrates the growing importance of consumer involvement in mental health systems of care. NASMHPD and MHSIP both recognize the value that consumer-based indicators add to comprehensive performance-measurement systems.

Studies have demonstrated that consumer satisfaction is related to treatment gains, employment, and other outcome variables (Holcomb, Parker, Leong, Thiele, & Higdon, 1998). Conducting outcome studies using consumer-reported data can produce unbiased population estimates at an affordable cost (Boothroyd, Skinner, Shern, & Steinwachs, 1998). Consumer ratings also are less likely to be provider-biased than are ratings by clinicians or administrators. Consumers rarely have a financial incentive in the results of an evaluation. Their concerns are more often based on need and less on regulatory requirements. Thus, consumer ratings, while subjective, may also provide a relatively unbiased evaluation of system performance.

The MHSIP Consumer-Oriented Mental Health Report Card (1996) and other consumer-based measurement systems consider that consumer perspectives are central. The MHSIP Report Card is value based (addressing issues of consumer choice, empowerment, and involvement); emphasizes concerns related to serious mental illness (though it can also address concerns relevant to all people with mental health needs); includes outcomes; and is research based. Additionally, the domains, concerns, indicators, and measures of the MHSIP Report Card were specifically designed to assess consumer concerns with selected aspects of mental health treatment, not merely global satisfaction with mental health services.

The MHSIP Consumer Survey was designed to be used in conjunction with other measures included in the Report Card. However, psychometric work conducted on State pilot data suggested that the survey could be used as a stand-alone instrument to measure three of the domains listed in the MHSIP Report Card: access, appropriateness, and outcomes (Wackwitz, 1998). Indicators from these three domains were developed and reported in the CMHS 5-State Feasibility Study. Initial reports of surveys conducted by participating States showed 77 percent of consumers reporting satisfaction with access to services, 74 percent agreeing that services were appropriate, and 65 percent reporting improved outcomes from services (Ganju & Lutterman, 1998).

The indicators used for the 16-State Project were selected from the NASMHPD President's Task Force Indicators. Four of the indicators are based on consumer surveys. These four indicators fall across three of the four domains measured by the project:

Indicator	**Domain**
Consumer Perception of Good Access	Access
Consumer Perception of Active Participation in Treatment Planning	Appropriateness
Consumer Perception of the Quality/Appropriateness of Services	Appropriateness
Consumer Perception of Positive Change as a Result of Services	Outcomes

Data collection for the 16-State Project has been under way for over a year. The MHSIP Consumer Survey is the most widely used instrument for the four indicators. Eleven of the 16 States are currently using the MHSIP Consumer Survey, with two more States planning to implement the survey in the near future. Survey data have been submitted for comparison and analyses by 10 States currently using the MHSIP Consumer Survey.

Policy and Decision Applications

Consumer survey data can be used to evaluate a provider's performance, compare providers, and assess quality improvement. Consumer surveys have been used to manage programs and to allocate program resources (McCarthy, Gelber, & Dugger, 1993), to evaluate and reimburse contractors, to track programs, and to gauge the overall functioning of programs. Consumer survey data can be used to assess care of underserved or minority populations and to identify barriers to treatment. The most obvious use of consumer survey data is to improve services by identifying problem areas and guiding quality-improvement efforts. Previous research suggests that 43 percent of clients who drop out of treatment do so because of negative experiences in their treatment (Schwartz, 1991). Clearly, addressing the needs of consumers is an important issue. Consumer survey information can be used to measure whether available services are meeting consumers' needs, whether needed services are available, and how consumers are or are not accessing needed services. The MHSIP Consumer Survey gives specific feedback about areas in which providers can improve services.

States are applying the MHSIP Consumer Survey results in a variety of ways. Some States use the indicators to compare providers' performance over the four domains. Others use the survey for quality improvement purposes by providing feedback to their providers based on each item in the survey. Many States are beginning to use the survey results for both provider comparisons and quality improvement. For instance, Colorado uses the survey to derive indicators for local providers as part of its performance incentive system, and Colorado also offers feedback to providers based on individual survey items for quality improvement purposes. Rhode Island publishes a report that incorporates both the indicators calculated from the survey and individual item results to report on performance statewide.

Future uses of consumer survey data may include combining survey data with other indicators. For instance, survey data could be used as an outcome measure in cost-effectiveness research (Phillips & Rosenblatt, 1992). Survey data also could be combined with service utilization data to explore relationships between consumer perceptions of treatment and program usage, or treatment compliance. As best-practice treatment models are developed (e.g., supported employment, assertive community treatment [ACT], atypical antipsychotic medication use), consumer survey data could be used as a treatment outcome measure. Outcome indicators derived from administrative data or clinical scales could be used in conjunction with consumer-reported outcomes to provide multiple perspectives on the same treatment effects. Significantly, outcome measures based on consumer reporting could have a major influence on service delivery models and treatment policies, bringing them more in line with consumer preferences.

The integration of consumer perspectives into performance measurement systems represents a major advancement in mental health evaluation. Consumer ratings of services can be useful at the provider level or the system level. The inclusion of consumer indicators in the 16-State Project supports the implementation of these measures within the public mental health system.

State Hospital Utilization

Introduction and Background

Utilization rates address fundamental issues of the degree to which people in different States make use of public mental health systems of care, and the degree to which these systems of care are responsive to people in different demographic and clinical groups. During its first year, the 16-State Project focused on State mental hospital utilization rates. In subsequent years, utilization rates for community mental health programs will be measured as well.

Two quantitative measures of State mental hospital utilization were used. *Penetration/utilization rates* compare the number of people hospitalized during fiscal year 1998 to the total population of each State. *Relative risk* compares the hospitalization rates for two groups of people.

There was substantial variation in overall State hospital utilization rates among the 16 participating States. State hospitalization rates in the 16 States ranged from less than 25 per 100,000 population in Arizona and Rhode Island to more than 500 per 100,000 population in Washington, DC.

Men had higher relative risk of State hospitalization in every State. Men were more than twice as likely as women to spend time in a State mental hospital in eight of the States. The hospitalization rate for men was more than 50 percent greater than the rate for women in six other States. Nonwhite residents had a substantially higher relative risk of State mental hospitalization compared to white residents during 1998 in all 16 States. Nonwhite residents were more than twice as likely as white residents to spend time in a State mental hospital in 9 of the 16 States. The hospitalization rate for nonwhite residents was more than 50 percent greater than the rate for white residents in all of the other States.

Policy and Decision Applications

Integration of quantitative findings such as these into policy formulation and evaluation is one of the challenges of the emerging information age. This process should begin by viewing these results from a comparative perspective. Penetration/utilization rates and measures of elevated risk of hospitalization should be compared to the philosophy and values of local and statewide systems of care. They should also be compared to penetration/utilization rates for other systems of care. Perhaps most important, the relationship between these measures and to other indicators of service system performance should be considered for both local and statewide systems of care. Information on the relationship among various indicators of access to care, practice patterns, and treatment outcomes can be a valuable tool for policy development and evaluation.

The interpretation of State mental hospital penetration/utilization rates is particularly challenging. Although State hospitals were once thought of as a progressive reform, they have more recently become devalued by many advocates and program administrators. "Appropriate" State hospitalization rates are a matter of debate and are widely seen to be a function of other attributes of systems of care. It is hoped that the information about State mental hospital penetration/utilization rates presented here (and in other places) will prove to be a valuable resource to those engaged in the policy debate that will continue to determine public policy in this area.

Interpretation of differences in hospitalization rates for people in different demographic groups is less difficult when it is guided by the principle of equity. Equity dictates that, lacking demonstrated clinical justification, members of different demographic groups have equal access to inpatient care. Where this is not the case, public policy discussion should address this demonstrated inequity. Where there is a reason for this inequity, it should be made explicit and be subjected to public policy consideration. Where there is no reason for this inequity, public policy that will reduce or eliminate the inequity should be developed and implemented.

The degree to which variation in State mental hospital penetration/utilization rates and relative risk of State hospitalization are related to differences in the prevalence of mental illness in the States or among different groups of people should be examined and considered. Similarly, differences in community resources, differences in public policy, or other differences should be considered.

State mental hospitals, of course, do not represent the totality of inpatient psychiatric care that is available to people in need. In many States, the State mental health agency contracts directly for inpatient care through other mechanisms. In all States, inpatient psychiatric care is provided in a variety of other settings that include general hospitals, private psychiatric hospitals, and Department of Veterans Affairs hospitals, among others. To obtain a full profile of behavioral health care penetration/utilization rates, mechanisms for measuring the utilization of these service sectors will need to be developed as well.

Assertive Community Treatment and Supported Employment

Introduction and Background

During the past decade, consensus has formed around the effectiveness of a few selected models of community treatment for persons with severe and persistent mental illness (SPMI). Two such models are ACT (Stein & Test, 1980; Test, 1992), and supported employment (SE) (Wehman, 1986). Both models have a large empirical research base supporting their efficacy and both have been widely disseminated (for reviews of ACT see Latimer, 1999; Mueser, Bond, Drake, & Resnick, 1998; for SE see Bond, Drake, Mueser, & Becker, 1997b). Although formally classified as quality indicators, the ACT and SE indicators measure processes (i.e., what is being done for clients) rather than outcomes (i.e., how clients are doing). ACT and SE were selected as quality indicators because they were thought to represent consensus best practices for persons with SPMI (NASMHPD President's Task Force, 1998).

The ACT and SE performance indicators are intended to index the percentage of persons with SPMI receiving one of the services. However, before one can determine who is receiving ACT/SE, it must first be verified that the service was delivered as intended. Departures from fidelity can critically affect outcomes in psychosocial programs; for example, receiving "ACT-like" services may not produce the same benefits as receiving ACT that has been implemented faithfully. For example, in a sample of 18 sites implementing ACT, McGrew, Bond, Dietzen, and Salyers (1994) reported a correlation of 0.60 between overall measured ACT fidelity and percent reduction in hospital use in the 2 years after admission compared to the 2 years prior to admission to ACT. Thus, the labeled service must closely correspond to the model definition of ACT or SE to truly represent best practice.

Without clear standards, measuring the percentage of clients receiving ACT or SE is problematic. States often use different definitions/standards for both ACT and SE, making comparisons difficult. A multistate workgroup designed a survey to determine the extent of this problem across the 16 States. The survey addressed two questions: (1) the extent of ACT and SE dissemination and (2) problems in defining and assessing implementation of ACT and SE. Eleven States returned data for SE; 10 States returned data for ACT.

The survey results for ACT revealed that 9 of 10 States reported implementing ACT, 6 reported an operational definition of ACT, 6 collected information on who received ACT, but only 2 States reported the information. In addition, just two States had detailed plans to measure ACT implementation (e.g., auditing records, monitoring programs, providing a detailed treatment manual). Finally, some conceptual ambiguity existed in defining ACT; for example, ACT was confused with case management.

The survey results for SE showed that 10 of 11 States were implementing SE, 8 had operational definitions of SE, but only 4 collected information on who received SE, and only 2 of those reported the information. Similar to ACT, only two States reported adequate methodology to measure implementation. Moreover, considerable conceptual ambiguity was evident in definitions of SE across the 16 States. Six of the eight States reporting definitions deviated from published definitions of SE (e.g., Bond, Becker, Drake, & Vogler, 1997a), including confusing SE with any vocational programming and defining transitional employment or enclave work as an instance of SE.

Both the survey results and the fidelity literature demonstrate the need to measure ACT/SE implementation prior to concluding that services are actually being received. Although fidelity instruments exist for ACT (e.g., McGrew et al., 1994; Teague, Bond, & Drake, 1998), and SE (e.g., Bond et al., 1997a), they tend to require a considerable investment of resources (onsite visits, staff interviews) that was deemed overly taxing for systems attempting to implement the entire performance indicators package. An alternate approach was to develop simplified checklists. Accordingly, preliminary checklists have been developed for both ACT and SE, based on the existing fidelity instruments and on literature specifying the critical ingredients (e.g., Allness & Knoedler, 1998; McGrew & Bond, 1995). Both checklists are one page, contain 14 items, present a simple list of the critical ingredients, and should take less than 15 minutes to complete. As currently conceived, clinical directors would check an item only if it is fully met. The instrument development plan is (1) to revise the instrument based on feedback from ACT experts/providers, (2) to pilot the preliminary checklists in several of the 16 States, concurrently gathering criterion fidelity ratings using the DACTS for ACT (Teague et al., 1998) and the IPS fidelity scale for SE (Bond et al., 1997a), and (3) to modify the checklists based on State-, site- and user-level feedback and on the results of the concurrent validity analyses, creating final checklists for use in the 16-State Project.

Policy and Decision Applications

Possible policy uses of the ACT/SE indicators include both service and evaluation/research applications (e.g., correlating ACT/SE adherence measure data with outcome data). Only policy implications for services will be discussed. Two points seem particularly relevant: (1) the policy use of process indicators is likely to be contingent on corresponding outcome information and (2) process indicators may directly influence the choice of which specific service models to implement.

Performance information is complex and is rarely used in isolation. The performance indicators give policymakers access to information about both outcomes, such as percent employed, and best practices, such as percent receiving SE. Although the outcome information alone, such as percent employed, could be used to guide decisions to change or continue current vocational services, it provides no information about how to change services (this is the role of best practice information). However, the process information alone, such as percent receiving SE, likely would not be sufficient to guide policy decisions. For example, in concert with superior performance in achieving employment, low SE penetration rates may have little impact on policy. However, low SE use combined with poor performance in achieving employment would likely lead policymakers to both reexamine current vocational services and strongly consider use of the specific best practice, that is, SE. Thus, the policy use of best practice information may be conditioned by information from the corresponding outcome domain. An exception, however, may be when best practices are strongly supported by important stakeholder groups (e.g., use of atypical antipsychotic medications). In this case, policy may be affected independent of outcome data.

An important facet of best practice indicators, as illustrated above, is that they tend to shape policy directly. That is, best practice indicators do not just provide information about the service domains that need targeting (vocational services), but possess additional demand characteristics that tend to promote the provision of specific services for the targeted domain (SE). In essence, best practice indicators deliberately attempt to shape local policymaking authority. Indeed, the previously mentioned controversy over best practice indicators revolves, in part, around a concern that policymaking autonomy is partially co-opted by the choice of the specific indicator. This latter concern sets the stage for the possibility of conflict between policymakers at the national, State, and local levels with the use of best practice indicators.

New-Generation Antipsychotic Medications

Introduction and Background

New-generation antipsychotic medications, also known as atypicals, were first introduced to the United States in 1990 with the approval of clozapine. Similar to conventional antipsychotic medications, atypical antipsychotic medications are indicated for the treatment of schizophrenia and psychosis and are effective in treating both the negative and positive symptoms of schizophrenia (Brown, Markowitz, Moore, & Parker, 1999).

Because of their efficacy and comparatively more tolerable side effects, the administration of atypical antipsychotic medication has been recommended as a first-line treatment for schizophrenia (Collaborative Working Group on Clinical Trial Evaluations, 1998) and is considered a "best practice." For these reasons, the "New-Generation (Atypical) Medication Use" performance measure was identified as a key quality/appropriateness indicator in evaluating mental health organization performance in both the 5-State Feasibility Study and the 16-State Project.

In the 5-State Feasibility Study, the "New Generation (Atypical) Medication Use" indicator measured the percentage of persons with a schizophrenia diagnosis (a DSM-IV diagnostic code of 295) who received atypical antipsychotic medications in a given year in both hospital and community settings. Four medications—clozapine, olanzapine, risperidone, and quetiapine—were identified as atypical antipsychotic medications. The 5-State Feasibility Study found that the overall median atypical medication use in the hospital setting was 40.6 percent and that rates differed across gender and race groups. The median rate for females was slightly higher than the rate for males (32.6 percent vs. 29.5 percent). In terms of race/ethnicity, whites had the highest median rate (38.7 percent) and blacks had the lowest (22.6 percent). Only one State was able to provide community data for this measure; interstate comparisons for this setting thus were not possible.

The definition of this measure and settings of interest remain unchanged in the 16-State Project. However, at least seven States anticipate that they will be able to provide community data, enabling interstate comparisons for that setting. Additionally, in response to the more widespread use of atypical antipsychotic medications for the treatment of other mental illnesses, the 16-State Project has added a second measure to this indicator. This second measure examines the percentage of clients, regardless of diagnosis, who receive an atypical antipsychotic medication.

Policy and Decision Applications

Given that administration of atypical antipsychotic medications is viewed as a "best practice," the underlying assumption is that the higher the administration rate, the better the care clients are receiving. However, where should one draw the line? Can we conclude that a State that has a 75 percent atypical medication use rate necessarily provides superior care to a State that has a 65 percent rate? A better way to determine whether a State provides an optimal level of access to atypical antipsychotic medication is to examine not only baseline rates, but also how those rates compare with other quality and outcome measures of care, and whether the rates are consistent across demographic groups and care settings.

An initial use for the "New-Generation Antipsychotic (Atypical) Medication Use" indicator is to establish a national-level baseline for atypical antipsychotic medication use rates by calculating average rates, for both hospital and community settings, across States participating in this project. A "first-pass" examination of this information would allow States to assess how they compare nationally in providing access to atypical antipsychotic medication for their clients, and determine whether policy or funding changes may be warranted to adjust their rates. It is worth noting that atypical medication use rates could have policy implications at units as small as the agency level or as large as the State, depending on how States choose to capture data for this measure and the information collected.

Once States have established their atypical medication use rates, those rates can be compared to other 16-State indicators, such as rehospitalization rates or symptom severity measures of clients. In patients diagnosed with schizophrenia, Olfson and colleagues (1999) found that the use of conventional rather than atypical antipsychotic medications was one of several factors associated with early (within 3 months of discharge) hospital readmission. Another study found that patients with schizophrenia treated with atypical rather than conventional antipsychotic medication (e.g., olanzapine vs. haloperidol) showed significantly greater symptom reduction, as measured by the Brief Psychiatric Rating Scale (Tollefson et al., 1997).

The data from the 16-State Project can be analyzed at the individual client record level to determine whether relationships exist between atypical medication use rates and the aforementioned indicators, and whether different profiles of care emerge across entities. For example, a State agency with the highest atypical medication use rate may show a lower readmission rate but only moderate changes in symptom severity over time, as compared to an agency with a slightly lower atypical medication use rate. Thus, the ideal rate for any given State will be a function of striking a delicate balance between access to atypicals and other system needs. A starting point for finding that balance could be to look to States/agencies with above-average profiles of care to suggest what preferable atypical medication rates might be.

Findings at any level (State, regional, agency, program) of a lower-than-average atypical medication rate or less-than-average profile of care could provide mental health administrators with support to lobby at the appropriate level (e.g., State or Federal) for increased funding for atypical antipsychotic medications. Such findings might also provide administrators with support to challenge some managed care policies regarding administration of atypical antipsychotic medication (e.g., requiring that a patient fail on a conventional antipsychotic prior to receiving atypicals).

Atypical medication use rates also can be analyzed to determine whether differential practices exist in prescribing atypical antipsychotic medications across demographic groups (e.g., gender, race/ethnicity, and age). Research has not demonstrated any significant gender or racial differences with respect to atypical antipsychotic medications. Thus, no compelling evidence in the literature suggests that atypicals should be prescribed differentially across gender or race/ethnicity groups. Older adults often tend to be even more susceptible to the side effects (extrapyramidal syndrome and tardive dyskinesia) associated with conventional antipsychotic medications, so the use of atypical antipsychotic medication in this age group may be indicated (Jeste et al., 1999). Thus, differing medication use rates across age groups also is not expected.

Examining the medication use rates for clients on atypical antipsychotic medications who receive care in hospital vs. community settings is also of interest. There is some concern that patients may receive atypical medications while hospitalized, but are then "stepped down" to conventional antipsychotic medications once in the community. Patients receiving care in both hospital and community settings could be tracked in the 16-State Project to determine whether those concerns are warranted. At various organizational levels (e.g., State, regional, agency, or program), if differences in atypical medication use rates are found among demographic groups or treatment settings, further examination could pinpoint why these differences exist and could result in the implementation of policies to ensure more equitable and consistent prescribing practices. Such policies might further evolve into adopting standard pharmacological treatment guidelines (e.g., guidelines based upon client diagnosis, symptomology, side effect sensitivity, and client preference) and/or working toward increased funding.

Readmissions to a State Psychiatric Hospital Within 30 Days of Discharge

Introduction and Background

Hospitalization of psychiatric patients is expensive and is typically indicative of an acute episode of illness. An important goal of mental health treatment is to minimize such episodes and provide services that will allow inpatients to return to the community as soon as possible. A person may be rehospitalized following an episode of inpatient care for many possible reasons, including the following: (1) hospitals may release patients prematurely to reduce cost, (2) persons may not receive adequate followup care, (3) inpatient treatment may be incomplete or ineffective, or (4) continuity of care does not exist between inpatient providers and community providers. This indicator looks at the percentage of consumers discharged that are rehospitalized within 30 days of discharge. If States can report performance on this indicator using a common definition and reporting structure, relative performance among States can be gauged. Those States with higher than expected rates of readmission within 30 days can then further analyze the factors underlying this finding to improve and strengthen the effectiveness of their inpatient and outpatient mental health service systems.

The 5-State Feasibility Study measured readmissions to a State psychiatric hospital within 30 days of discharge from any State psychiatric hospital. During the 5-State study, the ability of States to identify readmissions that had an earlier admission to a non-State hospital (e.g., a local or private hospital) within the prior 30 days was examined. The five participating States were largely unable to expand the database by linking client records to other (non-State psychiatric) hospital admissions.

For the 16-State Project, State grantees decided to analyze this indicator at 6 months following discharge from an inpatient episode in addition to the 30-day interval. The 6-month interval was felt to reflect the role that community mental health service and support systems play in preventing rehospitalization. The possibility of adding additional periods between discharge and readmission has been left open for future analysis by the 16-State Project group. In addition, an attempt was made to collect data at three different levels: (1) number of readmissions to the same hospital, (2) number of readmissions to any State mental hospital, and (3) number of readmissions to any State mental hospital or community hospital.

Policy and Decision Applications

Being able to report readmission data across States using common definitions and diagnostic and demographic categories will enable risk-adjusted comparisons between States to be made. Comparing performance for specific demographic and diagnostic groups at 30- and 180-day intervals will inform managers of problem areas and support enhanced monitoring of system initiatives aimed at reducing dependence upon inpatient care or enhancing access to less-restrictive alternatives.

This indicator, in conjunction with a second indicator, which looks at the percentage of discharged people who connect with outpatient services in the community within 7 days, is a powerful measure of the success of inpatient treatment and of the coordination postdischarge between service providers.

An example from New York State relates to the newly enacted (November 1999) Assisted Outpatient Treatment (AOT) Law. Under this law, eligible individuals are evaluated for legally mandated outpatient treatment. Although only a few of the individuals screened under this law proceed to a court order for mandated treatment, efforts are made to provide case management and other needed services on a voluntary basis to everyone. The indicators that measure inpatient readmission and contact with community mental health services within 7 days are being used as part of a system to monitor the effectiveness of the policies and programs implemented under this law. By having good data available that can be sensibly compared with the experience of other States, individuals diverted or treated under the AOT initiatives can be compared to other recipients of similar services. In summary, having indicator data with national benchmarks will enhance the ability of States to review and evaluate new policy initiatives and to manage programs based on commonly used and valid data.

Consumers Contacted by Community Providers Within 7 Days of Hospital Discharge

Introduction and Background

Among the external influences which can have a positive or negative effect on recovery or healing, Ruth Ralph (1999) includes the "policies, procedures, and actions of the mental health system." She also notes these system influences are generally outside the control of the consumer. For this reason, system administrators and service providers have a responsibility to establish and follow policies and procedures that will promote healing and recovery. One means of meeting these goals is to promote continuity of care as service recipients move from one level of care to another within the service system. Continuity of care is especially important for persons who are returning to their communities after receiving inpatient care. Achievement of such continuity can be measured by determining the percentage of persons discharged from inpatient care who are contacted by community providers within 7 days of hospital discharge.

In June 1993, a task force of the national MHSIP Ad Hoc Advisory Group submitted its report on "Performance Indicators for Mental Health Services." The task force had been charged "to enhance the MHSIP recommended data standards with the design of a system of performance indicators that can be derived from the content of MHSIP." One of the proposed indicators in that report was "How prompt is the linkage between discharge from inpatient and enrollment in outpatient services?" (MHSIP Task Force, 1993).

Although a different formula for measuring the indicator was used, the same issue was addressed by an appropriateness-of-care indicator in the MHSIP Consumer-Oriented Mental Health Report Card published in April 1996. The MHSIP Report Card, another product of a MHSIP task force, included a measure of the percentage of people discharged from inpatient services who receive ambulatory services within 7 days (MHSIP Task Force, 1996).

When the 5-State Feasibility Study was implemented, "percent contacted within 7 days of hospital discharge" was again selected as an important indicator of appropriateness and quality of care (NASMHPD Research Institute, 1998). Likewise, when the NASMHPD President's Task Force on Performance Measures (NASMHPD President's Task Force, 1998) established its standardized framework based on the earlier work, one of the quality-of-care indicators was "Consumers are contacted by community providers within 7 days of hospital discharge." It is this last formulation of the indicator that is currently being used in the 16-State Project.

Policy and Decision Applications

All of the indicators described above have focused on the concern that continuity of care is critical for consumers to avoid recurrence of symptoms and ensure that the process of recovery is not interrupted. The topic is important to consumers, payers, plans, and providers because it reflects the extent to which services provided at different facilities are linked: that is, whether services are provided within a coordinated system of care or among a disconnected set of organizations. The expectation is for clients who receive coordinated care to have better outcomes than those who do not, but linkage data will need to be combined with service utilization and quality-of-life measures to verify that this occurs.

The MHSIP Task Force Report on Performance Measures emphasized the multiple perspectives and differential needs for indicators among various mental health system stakeholders. Using the "contact within 7 days of inpatient discharge" indicator, consumers of mental health services, particularly those with serious mental illness who may have episodes of inpatient care, can compare plans to help them decide which is likely to best help them in their recovery from an acute episode. Payers can use this indicator to help determine which plans or provider groups are most effective in coordinating services. Plans and providers, in turn, can identify linkages that can be emulated or improved to provide more effective, less costly care.

Improvement in Functioning and Reduction in Symptoms

Introduction and Background

The measurement of improvement in functioning, which has been defined as consumers' increased ability to respond to problems, crises, and everyday situations as a result of mental health treatment, has long been accepted as one of the key indicators of treatment outcome. Similarly, the measurement of change in consumers' level of psychological distress as evidenced by a reduction in symptoms has been widely endorsed. Despite these facts, little agreement exists among States regarding the use of instruments to assess these outcomes, nor does consensus exist as to what amount of change is meaningful. This lack of agreement has resulted in the use of a wide variety of instruments to measure (1) functioning and symptoms and (2) different operational definitions of change. An early survey of the States participating in the 16-State Project revealed that seven different functional assessment instruments were being used with adult populations, and seven instruments were being used for the child and adolescent population. Similar results were found with regard to the measurement of symptoms, although fewer States reported measuring level of symptom distress. Essentially, State mental health agencies have selected instruments that best meet the needs of mental health stakeholders within their State. While this is a reasonable strategy, it presents a problem in terms of a stated goal of the 16-State Project, which is to work toward comparability of data across States.

During the 5-State Feasibility Study, initial efforts to operationally define improvement in terms of positive changes in functioning and symptoms led to the use of a definition that was somewhat arbitrary. However, given the different instruments used by the two States that were able to report, the short timeframe for completing the study, and the recognized importance of including these indicators, results were judged to be reasonable. There was a realization that issues related to comparability of ratings generated from different instruments would have to be addressed in the next phase of the study. The indicator, Percent Improvement in Functioning, was defined as the number of persons receiving community services with a minimum of a 10 percent change in functioning scores divided by the number of persons served in the community during the fiscal year. Maintenance was defined as less than a 10 percent change. The same definition was used for the Symptom indicator, with the focus on a decrease in symptoms. Differences in outcome patterns for closed cases were found for the two States reporting on the indicators, but the issue of whether this change was clinically significant and meaningful from consumer and provider perspectives was an issue, as was the comparability of the data. Different patterns were found for the distribution of open cases, adding another degree of complexity to the interpretation of the data. Several additional issues were raised, including the need to risk-adjust the data based on relevant variables, a need for consensus regarding data collection time points, and the reliability with which instruments are used. The complications inherent in using such data for comparisons across States and for demonstrating the impact of public mental health services in a routine summative way are apparent given these issues. However, if the major issue of comparability can be resolved—and it is believed that it can—the extent to which improvement in functioning and symptoms can contribute to the ethos of public accountability will be enhanced.

Policy and Decision Applications

If outcomes are the bottom line in terms of accountability for the public mental health system, then the implications for decisionmaking and policy development would seem to be clear. Programs and services that result in better outcomes represent those that should be continued and funded. Unfortunately, given the state of the art of the uniform assessment of outcomes and the methodological issues described above, the use of data for policy development such as this must be tempered. However, such data can be used, and are being used, for purposes of accountability and performance contracting to support decisionmaking for quality improvement.

Illinois has implemented an ACT model built on a foundation of evidenced-based research. Admission to ACT programs requires preauthorization by Office of Mental Health regional staff. Operating programs are routinely monitored to determine the extent to which the services provided maintain fidelity to the program model. There is an expectation that programs rated high in terms of fidelity should result in better outcomes. Using functioning assessments administered at various points in time, one could determine the outcomes associated with each program. If the outcome pattern for one program was found to be markedly different from patterns produced by other programs, it would be possible to compare the programs to determine what practices account for these differences. This information could then be used to improve program practices by moving the outcomes of the outlier program more into line with other similar types of programs. Although the Illinois Office of Mental Health has not taken this final step of comparing programs in terms of improvement in functioning and symptoms as described in this illustration, the potential to utilize the data for quality improvement purposes such as this is apparent.

The Texas Department of Mental Health and Mental Retardation (DMHMR) utilizes performance measures as part of a State agency planning and budgeting system in which appropriations are allocated to objectives and strategies as specified in a strategic plan. As part of this performance measurement system, both outcome and output measures have defined targets tied to funding. Improvement in functioning has been identified by the Texas DMHMR as a key performance measure that provides a means of public accountability. The underlying expectation is that mental health services will lead to improvement in consumers' functioning. Quarterly reports, using functional impairment data submitted by mental health providers, are prepared and submitted to the State legislature for review. The reports reflect how the DMHMR is doing in terms of performance contracting with providers to achieve defined targets for performance. These reports, which contain measures for each local service area, are also shared with local mental health agencies and local mental health planning advisory committees. Thus, the Texas DMHMR is accountable in a very public way to a variety of mental health stakeholders for demonstrating and documenting the outcomes of services purchased on behalf of the public it serves.

Texas has also used historical functional impairment data, specifically for children, as a basis for performance contracting with service providers. There is an expectation that 85 percent of the children and adolescents seen for services will maintain or improve their level of functioning during the contractual time period. Agencies not meeting this standard are at risk of losing $1,000 in contractual dollars. Although this may seem a small amount, the Texas DMHMR has implemented more than 20 indicators with similar standards attached to them. Thus, providers who fall below the standard on a large number of indicators will experience a serious fiscal impact.

The use of data for performance contracting such as this requires the use of audit procedures to ensure that the reported data accurately represent consumers' status. The Texas DMHMR periodically audits medical records to ensure accurate data reporting, and the validity of the data is audited through quality assurance reviews.

The Indiana Division of Mental Health utilizes functional assessment ratings as a basis for risk adjustment and to provide information to consumers in the form of a mental health report card that can be used as a basis for decisionmaking. Indiana utilizes a managed care model for the provision of mental health treatment—providers are certified as managed care providers. Functional assessment ratings are required for each consumer at the point of enrollment in treatment. This initial rating is one of several key variables used to develop risk-adjusted groups. The premise underlying this strategy is that severity of functional impairment, diagnosis, and other key variables are related to consumers' level of need. Service packages that differ in type and intensity of services have been designed specifically to address the level of need associated with the risk-adjusted groups. The arrays of services that constitute the packages determine the associated reimbursement rates.

The Division also collects functional assessment ratings at the end of the treatment (or at the end of the contract period), using this information to calculate change scores for each risk-adjusted group. Results are normalized using the average change score and the standard deviation across all agencies submitting the data. The data are then partitioned into thirds representing greatest improvement in functioning, moderate improvement, and least amount of improvement. This information is then fed back to providers in the form of a mental health report card that displays the pattern of outcomes for each risk-adjusted group by agency. Statewide values are also displayed for comparison purposes. The ultimate goal of this public report card is to provide information to consumers for use in decisionmaking regarding selection of providers for treatment given their diagnosis and severity of functional impairment.

In summary, despite issues associated with comparability of ratings across instruments, the States are using improvement in functioning and improvement in symptoms as a basis for accountability, performance contracting, decisionmaking, and, potentially, quality improvement purposes.

Cost Indicator

Introduction and Background

The MHSIP paradigm identifies cost as one of the core components of a mental health information system: *who* receives *what* from *whom* at what *cost* with what *outcome*. When a manager of a mental health system considers the management of resources, it is likely that money is the first resource that comes to mind. However, financial data typically have not been recorded and reported in a manner that facilitates comparing information across organizations or for aggregating financial information on organizations to describe systems of care (Leginski et al., 1989).

Currently, the management and analysis of cost data continue to challenge mental health administrators. The provision of cost-efficient services has been an ongoing goal of public mental health service delivery, yet the ability to track and evaluate costs meets many barriers (Broskowski & Chalk, 1998; Hargreaves, Shumway, Hu, & Cuffel, 1998; Larson et al., 1998; Wurster, 1997). Mental health programs are funded through multiple funding sources including Medicaid, Medicare, State and local funds, and private insurance. In many States, service utilization and cost data are not available from some of these funding sources, and dollars are tracked through cost reports that are completed months or years after services are delivered. Despite the complexity of collecting and analyzing cost data, this information is critical for understanding service delivery systems. As systems become increasingly competitive, timely knowledge of revenues and expenditures is critical. Fiscal data also provide information to managers on the cost of delivering a unit of service, the cost per client, and a system's ability to generate revenue.

One of the performance indicators for the 16-State Project is cost. It is being combined with several of the other indicators to provide a better understanding of access, utilization, and cost of services. When gauged against system values and goals and tracked over time, this information supports informed decisionmaking at all levels: Federal, State, local agencies, programs, and treatment teams. By examining these components together, managers can begin to understand trends in system-level changes across time. For example, combining information on access (e.g., penetration rates and number of clients per 1,000 population or per eligible member), service utilization (e.g., number of units per client), and cost (e.g., cost per unit of service) provides managers with a better understanding of service performance and helps them to manage risk. When information is examined across time, the resulting trends in system changes can also help evaluate the impact of policy changes.

Policy and Decision Application

A model for using cost data for decisionmaking is described below (Figure 1) and presents data from one State. This type of data is useful as a decision tool to examine access, service utilization, and dollars across programs and/or across years. This model shows two fiscal years, 1993–94 and 1997–98, to demonstrate policy trends across time. This model is useful in understanding the impact of system-level changes upon service patterns and costs. As a first step in understanding cost, administrators may examine total system dollars and service dollars across broad cost and service areas (e.g., inpatient, crisis/emergency, outpatient, day services). In this State's analysis, Residential Services are included in Day Services. Administrative costs associated with overall program operation are not shown, but could be added to the model. The total dollars and the proportion of dollars spent in each service area for each year show global trends in service delivery practices and reflect the State's values and policy changes. During this 5-year period, this State consolidated inpatient services and allowed counties to use savings to develop community-based services. As a result, counties negotiated lower bed day rates and expanded the delivery of outpatient services.

Using this model, an administrator interested in understanding cost issues would start with an examination of the total system expenditures and each service area's expenditures, both in absolute number and as a share of the total system expenditures. Trends in these expenditures reveal the growth or constriction of each service sector and/or the total system. For example, while inpatient service dollars declined, paid claims (dollars) for outpatient services increased. A comparison of such trends with the strategic plan will inform the administrator regarding the actual implementation of their direction of change. Next, the total number of unique clients served statewide, as well as the unduplicated client count for each service area, informs the administrator about system access and capacity. When the number of clients in a service area is expressed as a proportion of all clients, the data show the relative salience of the services in the system. For example, while 11 percent of all clients used inpatient services in 1997–98, more than 95 percent used outpatient services. The number of units of service for each area can serve as an indicator of service access. Measures of units of service, of course, differ depending upon the type of service. Normally, the units for inpatient and day-treatment services reflect a day of services. Crisis and outpatient services reflect client contacts. Consistency in counting units is important for comparing similar organizations within a specific program type. To compare (or aggregate data across) different pro-

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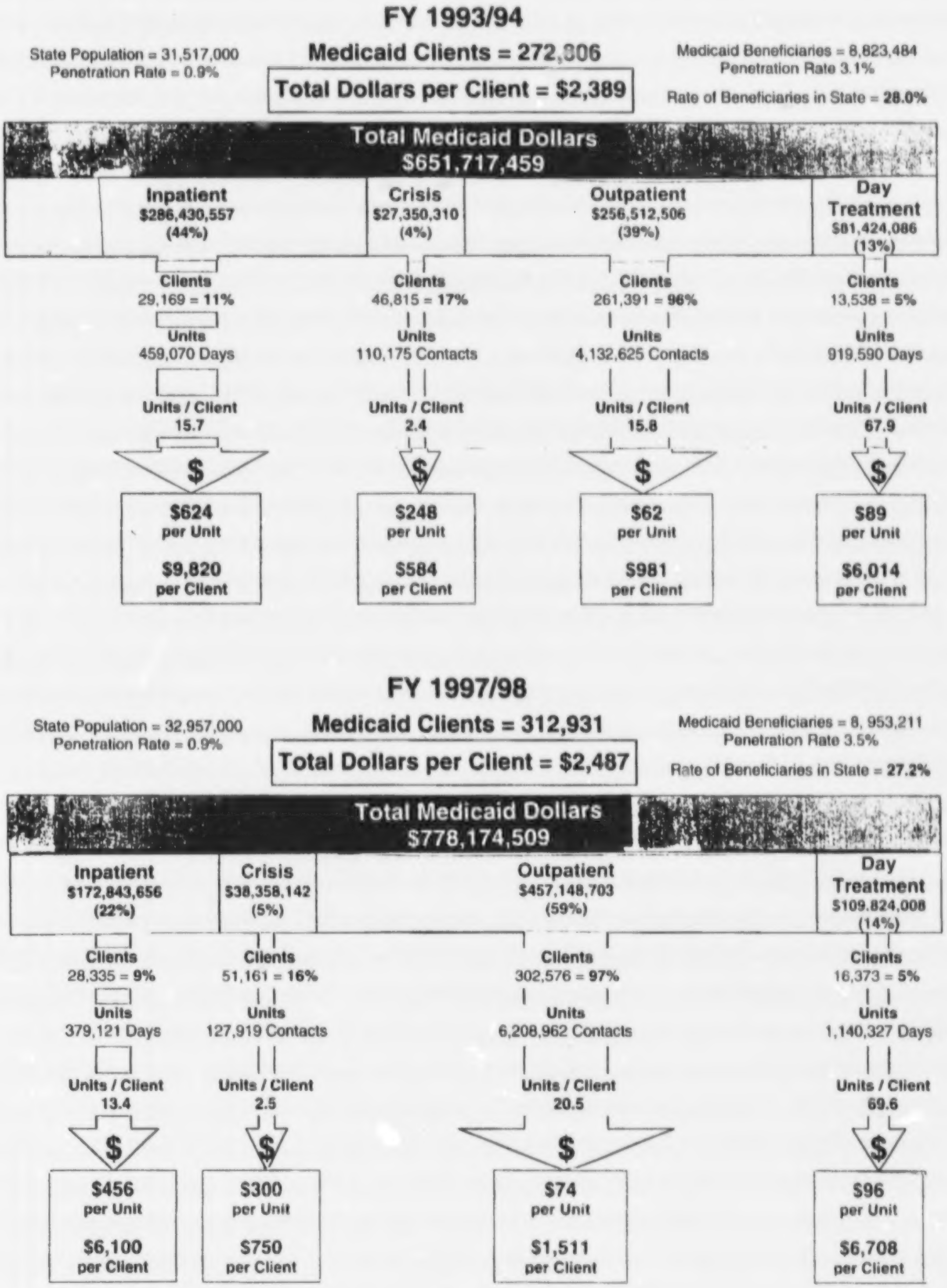
FY 1993/94
State Population = 31,517,000
Penetration Rate = 0.9%
Medicaid Clients = 272,806
Total Dollars per Client = $2,389
Medicaid Beneficiaries = 8,823,484
Penetration Rate 3.1%
Rate of Beneficiaries in State = 28.0%
Total Medicaid Dollars
$651,717,459
Inpatient
$286,430,557
(44%)
Crisis
$27,350,310
(4%)
Outpatient
$256,512,506
(39%)
Day Treatment
$81,424,086
(13%)
Clients
29,169 = 11%
Units
459,070 Days
Units / Client
15.7
$
$624
per Unit
$9,820
per Client
Clients
46,815 = 17%
Units
110,175 Contacts
Units / Client
2.4
$
$248
per Unit
$584
per Client
Clients
261,391 = 96%
Units
4,132,625 Contacts
Units / Client
15.8
$
$62
per Unit
$981
per Client
Clients
13,538 = 5%
Units
919,590 Days
Units / Client
67.9
$
$89
per Unit
$6,014
per Client
FY 1997/98
State Population = 32,957,000
Penetration Rate = 0.9%
Medicaid Clients = 312,931
Total Dollars per Client = $2,487
Medicaid Beneficiaries = 8, 953,211
Penetration Rate 3.5%
Rate of Beneficiaries in State = 27.2%
Total Medicaid Dollars
$778,174,509
Inpatient
$172,843,656
(22%)
Crisis
$38,358,142
(5%)
Outpatient
$457,148,703
(59%)
Day Treatment
$109.824,008
(14%)
Clients
28,335 = 9%
Units
379,121 Days
Units / Client
13.4
$
$456
per Unit
$6,100
per Client
Clients
51,161 = 16%
Units
127,919 Contacts
Units / Client
2.5
$
$300
per Unit
$750
per Client
Clients
302,576 = 97%
Units
6,208,962 Contacts
Units / Client
20.5
$
$74
per Unit
$1,511
per Client
Clients
16,373 = 5%
Units
1,140,327 Days
Units / Client
69.6
$
$96
per Unit
$6,708
per Client

Figure 1. Cost model: **All Clients** Medicaid data

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gram types, it may be necessary to translate units to a common denominator, such as hours or quarter-hours. As with expenditures and client counts, units of service reflect trends within each program and as a proportional share relative to the total system. Certain obvious red flags should be paid immediate attention, such as when expenditures increase but units of service decrease; when the rate of growth in clients served is matched by the rate of growth in units of service; or when units of service vary across similar provider organizations. These red flags are easily recognized by using ratios: cost per client (expenditures divided by clients served), cost per unit of services (expenditures divided by units of service), and intensity of service (units of service per client). An increase in cost per client accompanied by an increase in cost per unit of service suggests that resources are not being used efficiently or have become more expensive. These administrative red flags can be constructed for each program type and its subcomponents as well as for different client subpopulations as defined by age, ethnicity, funding source, clinical status, and so on. These "drill-down" statistics are extremely useful in identifying not only potential problem spots, but also instances of "best practice." When counties in this example were allowed to manage their own inpatient services, bed day rates were negotiated lower. The savings were used to expand outpatient services. As a result, the bed day rate dropped from $624 to $456 per day over a 5-year period. The result is a large decrease in the average inpatient dollars per client from $9,820 to $6,100 and a simultaneous increase in the availability of outpatient services.

Additional steps would measure consumer perception of access and quality of services through consumer surveys. Outcome measurement instruments provide information on the effectiveness of services on clients' recovery and ability to function independently. Managers can begin using this simple cost-effectiveness model to understand broad issues of access, utilization, and cost by service area. More sophisticated levels of analysis can then be developed and utilized to understand service delivery to meet a variety of outcomes to ensure access, quality, and cost-effectiveness.

Summary

The sections in this chapter highlight significant facets that are important in addressing performance indicators and mental health policy- and decisionmaking. Judy Hall emphasizes the importance of including consumer perspectives in a comprehensive management information system; John Pandiani states that a need exists to take into account the philosophy, values, and contexts of hospital or community settings when penetration/utilization rates are being considered; John McGrew demonstrates new methods of collecting comparable best practices information in States; Amy Elliott describes how comparison of atypical antipsychotic medication baselines for demographic and hospital and community settings can inform and assist in policy- and decisionmaking; Al Volo and Sudha Mehta discuss how data on readmissions to psychiatric hospitals can inform and influence State policy; Steve Davis illustrates how data on 7-day contact following hospital discharge could be utilized for consumer selection of managed care plans; Mary Smith illustrates how existing State systems are utilizing data on level of functioning and symptoms to assess and manage programs; and Nancy Callahan demonstrates an approach that can inform States on how to identify cost and service utilization change across time for program and policy decisionmaking. Some trends that appear in these commentaries include the need to assess subgroup findings, the need to address combinations of indicators for a more informed picture, and the ability to target findings and planning at the local as well as State and national levels.

Some closing comments are important to note in regard to the 16-State Project effort. First, it must be kept in mind that the work of the 16-State Project is part of an historical effort that has been developing over a period of years. The work to develop a conceptual framework, identify indicators and measurements, and pilot and then apply them in divergent and changing State systems is a difficult and arduous task. Both time and resources will have been required to finally arrive at findings on selected performance indicators. Once actual findings are available, information must be considered in terms of the context of existing policies, programs, and populations which may explain differences. One must be able to dig deeper into what an indicator "implies," as other factors may be influencing a finding. There must also be risk adjustment to understand information by subgroup, such as age, race/ethnicity, gender, and diagnostic groupings, as appropriate to each indicator. Once there is knowledge of what indicator findings mean, policy- and decisionmaking can be addressed. The point is that information must be fully understood before it is used for policy- and decisionmaking application.

Also, within this process, the development, piloting, and implementing of performance indicators must involve key stakeholders at every stage. These key stakeholders must include providers, consumers, and family members. The process must involve, inform, and train these persons, and they must have input into the content and direction of the effort. This involvement and representation are grant requirements in the 16-State Project. Third, persons involved in these efforts must not lose sight of the overarching goal within these efforts: to improve information so that we can better support the recovery of persons with mental illness.

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Chapter 18

The Availability of Mental Health Services to Young People in Juvenile Justice Facilities: A National Survey

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In addition to its nationwide surveys of mental health organizations and the people they serve, the National Reporting Program of the Center for Mental Health Services (CMHS) continues to fill the gaps in information about the availability of mental health services outside of the traditional mental health sector. The survey discussed in this chapter builds upon earlier successful inventories of mental health services availability in State prisons (Goldstrom, Rudolph, & Manderscheid, 1992) and in local jails (Goldstrom, Henderson, Male, & Manderscheid, 1998) and represents another step toward the completion of the picture of the "de facto mental health system."

The *1998 Inventory of Mental Health Services in Juvenile Justice Facilities* is the first national survey of the availability of mental health services to young people in juvenile justice facilities. As such, it can contribute to the momentum building to better address the needs of children and adolescents with mental, emotional, or behavioral health problems. A 1999 Amnesty International report discussed the lack of mental health services for children both in the community and within the juvenile justice system. In October 2000, the American Academy of Pediatrics (2000) issued a consensus statement signed by 14 organizations recognizing the shortage of community mental health services for young people, the effectiveness of specific mental health services, and the potential impact of early intervention to reduce the number of young people involved in the juvenile justice system. Even more recently, the Coalition for Juvenile Justice's annual report to the White House and Congress summed up its sentiments by citing a juvenile justice superintendent's words that "finding a suitable placement for a youth with mental health problems is the 'single, greatest problem we face'" (Coalition for Juvenile Justice, 2000).

These concerns are now at the forefront of public policy discussion and action. Of late, much has been accomplished with regard to establishing promising partnerships and collaboration between the various, often intersecting, sectors caring for young people—mental health, juvenile justice, educational, child welfare, and social services; general health care; substance abuse systems; and families—to form the basis for solutions. However, the collection of empirical data to examine trends and support policy decisions lags far behind. In an effort to look at the relationship between at least two of the partners—the mental health system and the juvenile justice system—the present survey provides a snapshot of mental health services available in juvenile justice facilities in 1998. It establishes a baseline about the availability of mental health services in these settings so that we can begin to objectively measure the impact of policy changes over time. This survey also examines the disciplines of the mental health providers working within the juvenile justice system and which other sectors of care are interacting with the juvenile justice system to provide access to mental health services for the children and adolescents within the system.

The Juvenile Justice System

Historical Perspective

Like the mental health system, the juvenile justice system evolved out of society's attempt to break

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away from using jails and prisons to house its most vulnerable citizens. Prior to the development of the juvenile court 100 years ago, children were housed with adults. Despite this, the roots of the juvenile justice system were in civil and not criminal law; hence the juvenile justice system was created as distinct from the adult criminal justice system in both intent and practice.

The juvenile justice system in the United States was modeled after the English doctrine which allowed the court, on behalf of the state, to become parent to children whose biological parents were unwilling or unable to raise them. The court was deemed to be benevolent; its number one concern was the welfare of the child. These ideals applied equally to young offenders, as well as to those who were dependent, neglected, and abused. Treatment, rehabilitation, protection, and guidance were the watchwords of the juvenile court (Greenwood, 1984).

The Contemporary Juvenile Justice System

Developments in the juvenile justice system in the 1960's and 1970's paralleled some of those in the mental health movement. Policies of deinstitutionalization, diversion, and community care in the least restrictive setting were implemented. However, as the policy pendulum inevitably swings, by the 1990's the prevailing public attitude, which has followed us into the new millennium, has been to "get tough on crime" (Kresnak, 1999; National Governors' Association, 1991). In 1996, for example, 10,000 delinquency cases were waived to the adult criminal justice system (Snyder & Sickmund, 1999).

Today, there is a contradiction between the original intent of the juvenile justice system, based on treatment and rehabilitation on the one hand, and the public urge to punish, on the other. The notion persists that juvenile crime is pervasive and worsening, despite the fact that the rate of serious violent crimes committed by young people in 1998 was the lowest recorded since these data were first collected in 1973, representing a drop of more than one-half from the 1993 high (Earl Appleby, July 13, 2000, personal communication).

Many contemporary challenges exist to providing mental health services to young people in the juvenile justice system. The move by States and local political entities to contract with "for-profit" corporations to operate juvenile justice facilities historically operated under contract by not-for-profit agencies has raised concerns that business motives may conflict with professional standards of staff safety, public safety, and quality of life for residents (NJDA, 2000). As the operation of public systems has been privatized (as was the case with the mental health system in the 1980's), there is concern that government is abandoning its role as service provider and regulator (Privatization, 1998; remarks by John Petrila).

Financing issues abound. State budgets tend to favor institutional- over community-based services for public sector spending on juvenile justice. Categorical funding at the Federal, State, and local level impedes interagency collaboration. Since 1984 changes in Federal regulations regarding Medicaid, responsibility for financing health services to youth in juvenile justice facilities has shifted from Federal to State or local governments, creating health disparities. Youth in facilities that are largely private, such as group homes and halfway houses, remain eligible for Medicaid, thereby ensuring that the Federal and local governments share in their health care costs (NCCHC, 2000). Youth in largely public facilities, such as detention centers and training schools, don't have this same assurance.

Overcrowding, particularly affecting public facilities such as detention centers and training schools, is increasing and is associated with suicide, physical assaults, and accidental injuries (NJDA, 2000), as well as reduced services and programs and the inability to train staff. Rates of suicide in juvenile justice facilities are higher than in the community (Hayes, 2000).

Because no one system operates in a vacuum, trends within the mental health system have affected the juvenile justice system. For example, deinstitutionalization of State mental hospitals has resulted in shifts between inpatient mental health care and the juvenile justice system (American Psychiatric Association, 1995). To the extent that children and adolescents cannot get mental health benefits, or have inadequate benefits, there are fears that the juvenile justice system will become the default system for the provision of mental health services (Bilchik, 1997). This fear is accompanied by the reluctance of the mental health system to treat children and adolescents who are poor and may be violent (Hunzeker, 1993) and by doctor and therapist shortages and long waiting lists at local mental health clinics (Coalition for Juvenile Justice, 2000). There is an overrepresentation of young people of color in the juvenile justice system; these same children and adolescents are underserved in the mental health system (GAINS Center, 1999). Juvenile justice facilities, like mental health facilities, often lack culturally appropriate and competent tools, staff, and programs.

Both the mental health and juvenile justice systems share the problem of a lack of available and appropriate services and residential placements. The success of both systems relies on providing a full continuum of care and treatment in the least restrictive setting possible. Because nonsecure placements have declined at least 25 percent over the past 10 years, fewer mental health, group home, and foster care placements exist, and children and adolescents are forced into more stressful institutionally based placements (Prescott, 1998).

Lingering questions remain about who is responsible and who pays for mental health services to youth in the juvenile justice system. Different systems may recognize their joint responsibility to young people, but tight budgets at the local levels, where pooled or blended funding does not exist, reinforce turf wars.

Young People With Mental, Emotional, or Behavioral Health Problems and the Juvenile Justice System

"Children who live in poverty and children of the working poor are dependent on fragmented and under funded public systems that typically fail to provide them with safety nets" (Coalition for Juvenile Justice, 2000).

Risk of Involvement in the Juvenile Justice System

Children and youth with mental, emotional, or behavioral health problems are at high risk for having additional disabilities, such as learning disabilities, and are also at risk for falling through safety nets, particularly if they drop out of school. Among those identified with a serious emotional disorder who have dropped out of school, 73 percent were arrested within 5 years (Garfinkle, 1997).

There is considerable consensus that age, race, ethnicity, gender, and socioeconomic status, more than diagnosis, determine whether a child or adolescent with mental, emotional, or behavioral health problems has contact with the juvenile justice system. It has been found that young people in the juvenile justice system with these problems are similar to those in the community mental health or other public sector service systems in terms of their behavior and service needs, and are much more alike than either is to other children and adolescents in their community (Hunzeker, 1993; Melton & Pagliocca, 1992; National Conference of State Legislatures, 1989).

Whether a child with mental, emotional, or behavioral health problems with a status offense such as running away, for example, becomes involved in the juvenile justice system has a lot to do with factors beyond his or her control, such as the following:

- availability of health insurance and family resources, if any;
- whether the child is a youth of color, or a boy or a girl;
- the availability and quality of special educational services in his or her local school;
- coordination, or the lack thereof, of the multiple agencies dealing with youth in his or her community;
- where he or she is first recognized as having a problem and/or is first treated; and
- the values of the State and local community, as reflected in their budget priorities.

Characteristics of Young People With Mental, Emotional, or Behavioral Health Problems Within the Juvenile Justice System

Poor children and adolescents are overrepresented within the juvenile justice system and experience higher rates of mental, emotional, or behavioral health problems (GAINS Center, 1999). Once within the juvenile justice system, there is some evidence that young people with mental, emotional, or behavioral health problems fare less well than youth without these problems. In one State study, children and adolescents with mental, emotional, or behavioral health problems stayed an average of 5.7 times longer than others in the juvenile justice system (Privatization, 1998; remarks by Chris Siegfried).

Like adults in the criminal justice system, youth in the juvenile justice system are more likely to have histories of child abuse and neglect. It is estimated that between 25 percent and 31 percent have been abused and that between 6 percent and 28 percent have previously attempted suicide (Edens & Otto, 1997). Girls experience higher rates of depression, attempt suicide more often, frequently self-mutilate, demonstrate a high prevalence of physical, sexual, and emotional abuse and victimization, and are more likely to be at risk for overmedication without psychotherapy (Prescott, 1998).

Further, dealing with fragmented systems can enhance the problems faced by many young people with mental, emotional, or behavioral health problems who become involved in the juvenile justice system. Many may have lived in shelters because of abuse or neglect in the home or in therapeutic foster care (child welfare system). Concurrently, they may be in special education classes at school (educational system). Perhaps they have resided for a period in a residential treatment center or psychiatric hospital (mental health system). If they are arrested, even for something relatively minor such as trespassing, they come under the auspice of yet another agency and cast of characters, and their problems are likely to be exacerbated by the multiplicity of bureaucracies trying to help them.

It is also important to note that young people may enter the juvenile justice system without mental, emotional, or behavioral health problems; however, these problems may be triggered by a host of environmental stressors once they are there.

Epidemiology of Mental, Emotional, and Behavioral Health Problems Within the Juvenile Justice System

Generally, what we do know about the extent of mental, emotional, or behavioral health problems in juvenile justice settings is, as Edens and Otto (1997) point out, the following: the prevalence of mental disorders is considerably higher than it is in the general population; the prevalence is higher than in community settings; conduct disorders are the most common diagnosis; the co-occurrence of more than one mental health problem, such as conduct disorder with attention deficit or attention deficit hyperactivity disorder, post-traumatic stress syndrome, or affective disorder, is high; and the co-occurrence of any mental, emotional, or behavioral health problems with substance use is higher than in the general population.

Because national epidemiologic studies of children and youth are so costly, they are rarely undertaken. None have been done in the juvenile justice system. Estimates of the number of children and adolescents with mental, emotional, or behavioral health problems in juvenile residential placements come from various sources, such as extrapolations from general prevalence studies, and State and local studies in particular juvenile justice settings, such as detention centers. Many studies do not have generalizability because of the limitations of the research (Cocozza, 1992), such as the way they define mental, emotional, or behavioral health problems in the first place.

For the purpose of estimating incidence and prevalence, CMHS recognizes three levels of mental, emotional, and behavioral health problems for children ages 9 to 17, based on degree of functional impairment. In the general youth population, 20 percent have a diagnosable disorder. Within this 20 percent are young people with *serious* emotional disturbances that interfere with school, family, community activities and other aspects of their daily lives; an estimated 9 percent to 13 percent of them have *substantial* functional impairment, and within that group, 5 percent to 9 percent have *extreme* functional impairment (Friedman, Katz-Leavy, Manderscheid, & Sondheimer, 1996, 1998).

On the basis of these general population estimates and other methodologically sound studies, experts expect that the prevalence of young people with *serious* mental disorders in juvenile justice settings is at least 20 percent (Open Society, 2000). A National Mental Health Association (2000) analysis of multiple well-designed studies estimates that up to 75 percent have some mental, emotional, or behavioral health problem.

Edens and Otto (1997) have produced "tentative" estimates for specific disorders and common experiences of children and adolescents in juvenile justice settings as follows: 50 to 90 percent with conduct disorder; up to 46 percent with attention deficit disorder; 6 to 41 percent with anxiety disorders; 25 to 50 percent with substance abuse or dependence; 32 to 78 percent with affective disorders; and 1 to 6 percent with psychotic disorders. Further, they estimate that between 12 percent and 26 percent have experienced psychiatric hospitalization, and 38 percent to 66 percent, outpatient treatment. More than 50 percent have co-occurring disorders.

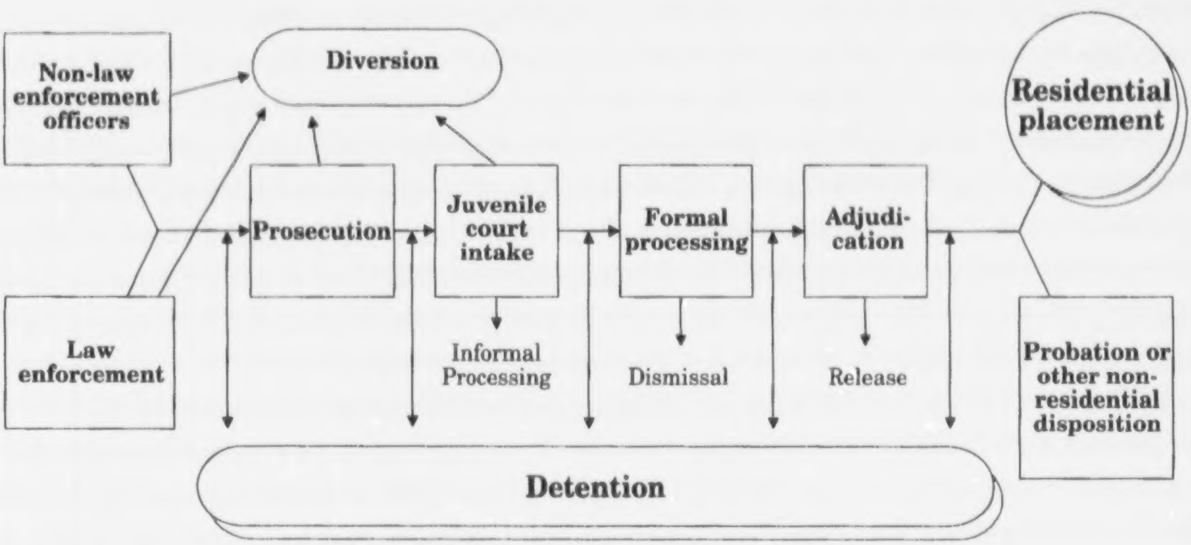
In addition to estimates of incidence and prevalence of mental, emotional, or behavioral health problems in the system as a whole, there are some data about the mental health needs and prevalence of specific mental disorders in one facility type: detention centers. A 1994 study in Virginia detention centers during 1 day revealed that nearly one-half (49 percent) of the children and adolescents required mental health services and 20 percent had been hospitalized in a psychiatric facility (Virginia Department of Criminal Justice Services, 1994). In a more recent study funded by CMHS, Teplin (unpublished data) found that on 1 day, 68 percent of youth in detention had at least one *DSM-III-R* disorder (American Psychiatric Association, 1987); 19 percent had a *DSM-III-R* diagnosis of any affective disorder; 22 percent, any anxiety disorder; 42 percent, any disruptive behavior disorder; and 49 percent, substance abuse or dependence. The presence of substance abuse or dependence confounds residential placement decisions because there may be separate facilities for these youth. [These separate placements are not included in the CMHS survey. However, the Office of Applied Studies, Substance Abuse and Mental Health Services Administration recently completed a survey of substance abuse treatment in juvenile justice facilities, using essentially the same universe as the CMHS survey, and found that approximately 37 percent of these facilities provide substance abuse treatment (SAMHSA, 2000).]

CMHS Survey Background and Definitions

Juvenile Justice Facilities

Figure 1 provides an orientation to the juvenile justice system. It portrays selected portions of a chart designed to illustrate how cases flow through the juvenile justice system (Snyder & Sickmund, 1999). (Note: State and local systems differ; therefore, this schematic should be viewed as illustrative only.) Of relevance to the CMHS survey and the mental health field in general are the following points:

First, note the arrows pointing toward diversion from the various boxes. The intention of the juvenile justice system (probation officers, intake officers, and/or prosecutors) during these early stages is to evaluate young people's needs, assess their amenability to treatment, and decide whether to divert the youth outside of the juvenile justice system or to move the case forward to adjudication (judgment). It is important to keep in mind that there are nu-



Note: This chart gives a simplified view of caseflow through the juvenile justice system. It excludes interface with the criminal justice system. Procedures vary among jurisdictions.

◯ **= Focus of CMHS Survey**

Figure 1. Relevant stages of delinquency case processing in the juvenile justice system

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merous opportunities for diversion out of the juvenile justice system to appropriate mental health services, if the latter are available.

Second, like the mental health system, the aim is to place youth in the least restrictive setting possible, which often depends on the local availability of a continuum of facility types. Facilities differ with regard to the degree of security they provide, their proximity to the local community in which family resides, whether the facility is public or private, and their usefulness for short- or long-term placement.

Last, at some point between initial referral to the court and a disposition by the judge, young people may be held in secure detention centers, sometimes called "youth jails." In 1996, 320,400 delinquency cases in the United States involved detention (Snyder & Sickmund, 1999). Detention centers hold children and adolescents when it is believed the youth is a threat to the community, will be at risk if returned to the community, or may fail to appear at an upcoming hearing, as well as for diagnostic evaluation purposes (Snyder & Sickmund, 1999). They also serve as temporary placements until beds open up in more appropriate residential placements; in this regard, some young people may have to wait a long time.

The focus of the *1998 Inventory of Mental Health Services in Juvenile Justice Facilities* is on mental health services availability in detention centers, shelters, reception/diagnostic centers, group homes and halfway houses, ranches/camps/farms, residential treatment facilities, and training schools.

Figure 2 defines these facility types. Generally, facility type is ordered on this figure and subsequent tables ranging from the shortest term facilities to the most secure, longest term institutions.

As Figure 2 demonstrates, facility types have different placement purposes that may impact on their provision of mental health services. Detention centers and shelters tend to accommodate young people who stay for a short time, usually prior to adjudication; the remaining facilities are for those who stay for a longer term, postadjudication. Shelters, group homes, and halfway houses tend to be in local communities. Training schools are typically the most secure placement for children and adolescents, with the longest stays. It is important to keep these differences in mind when examining the data.

Table 1 displays the number and percentage of juvenile justice facilities in the survey and the number and percentage of youth in these facilities on 1 day, by type of facility. Group homes and halfway houses constituted the most numerous facility type; over one-third (36 percent) of all facilities were of this type, yet only 13 percent of youth resided in them on 1 day. After group homes and halfway houses, the most common types of facilities were residential treatment facilities (RTFs) (24 percent) and detention centers (18 percent). Youth were fairly evenly distributed among detention centers (26 percent of youth), RTFs (22 percent of youth), and training schools (25 percent of youth).

The plurality of juvenile justice facilities in the survey, group homes and halfway houses, are less likely to formally provide on-site access to mental health services and to have staff available to answer a long survey form. In order to accommodate their uniqueness and not overwhelm them with a lengthy questionnaire, a short version of the survey questionnaire was designed. Please see appendix C for details about the methodology, the survey forms used, and the impact of the different questionnaires on analyses.

Mental Health Services

Figure 3 provides the definitions of seven mental health services used for the survey. Recent policy statements (Surgeon General, 2000) and literature highlight the importance of early identification of youth with mental health problems in the juvenile justice system. Therefore, intake screening of each child and adolescent, and subsequent evaluation by a mental health professional for those suspected as having a mental health problem, are essential services (Open Society, 2000). Screening should occur at the earliest point of contact and be available at all stages of juvenile processing (Cocozza & Skowyra, 2000), including upon entry to a juvenile justice facility. (Note that with the exception of detention centers, this survey does not capture screening and evaluation services that may take place prior to adjudication.) It bears repeating that it is not only youth with preexisting conditions who are of concern, but also those who may develop mental, emotional, and behavioral health problems while in the custody of the juvenile court.

In addition to screening and evaluation, 24-hour availability of emergency mental health services is important, especially in overcrowded settings. Emergency services, as well as screening, are helpful to identify youth with mental, emotional, or behavioral health problems and to reduce the potential for suicides.

Figure 2. Types of juvenile justice residential facilities

Prior to Adjudication*

Detention Center. Sometimes referred to as a "youth jail." A *short-term secure* facility where a youth may be placed at any time during the processing of his or her case, for the purposes of evaluation, or placement if a secure environment is deemed necessary. These are predominantly *public* facilities.

Shelter. A *short-term community-based* facility, similar to a detention center, but in a less secure environment. Generally, status offenders** are placed here. There may also be youth here who can't go home because of problems with their parents or who are homeless; therefore, offenders and nonoffenders are housed together in some facilities. These are predominantly *private* facilities.

Postadjudication

Reception or Diagnostic Center. A *short-term* facility that screens youth who have been judged delinquent*** if they are in need of further evaluation to help in the assignment of a residential placement. These are predominantly *public* facilities.

Community-Based Placement

Halfway House or Group Home. A *long-term, less secure, community-based* facility where youth are allowed access to community resources such as school, jobs, and health care. Youth may be either in transition from more secure environments or placed here as their original placement. Status offenders may be housed here. Offenders and nonoffenders are housed together in some facilities. These are largely *private* facilities.

Institutional Placements

Ranch, Forestry Camp, or Farm. A *long-term* placement for youth whose behavior does not merit the more prison-like environment of a training school. These are generally in counties, not local communities. Status offenders are unlikely to be in these facilities. Half of these facilities are *public* and half are *private*.

Residential Treatment Facility. A *long-term secure* residence where treatment is the basis for placement. Offenders and nonoffenders are housed together in some facilities. These are largely *private* facilities.

Training School. A *long-term secure* environment for offenders, similar to a prison. These are largely *public* facilities.

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*Judgment.

** Status offense is a law violation only for young people, such as running away from home, truancy, ungovernability, curfew violation, and underage drinking.

*** Delinquent offense is an act committed by a young person for which an adult could be prosecuted in criminal court, such as robbery.

Once a youth is recognized as having a mental health problem, treatments, such as therapy and medication, are important. It may not be appropriate for short-term facilities to provide therapy/counseling if the children and adolescents are not there long enough to benefit; however, if treatment is one of the pillars of the juvenile justice system's ideals, therapy would be expected to be widely available in long-term facilities. Although there is controversy about the use of medication as a restraint in juvenile justice settings, its availability is sometimes essential for treatment purposes. Ideally, medications are given in conjunction with therapy, not in lieu of therapy.

Figure 3. Definitions of mental health services used in CMHS survey

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Question to Respondents: *Are any of the following mental health services available to juveniles assigned beds at your facility?*

Screening for Mental Health Problems (Screening). A formal or informal mental health screening of *all* juveniles assigned beds at your facility. Screening is designed to briefly identify youth at risk of mental health problems, to determine whether services are needed, or to link him/her to the most appropriate and available service resources.

Mental Health Evaluation or Appraisal (Evaluation). A clinical evaluation or appraisal (other than routine screening) done by a mental health professional to determine a juvenile's diagnosis and problem and to provide information upon which to formulate a plan for subsequent services. Exclude evaluations for competency to stand trial and court-ordered evaluation or appraisal.

Emergency Mental Health Services (Emergency). Procedures for handling crises when a juvenile is at risk of harm to self or others. Procedures must include emergency mental health evaluation or appraisal and treatment and be available 24 hours a day.

Medication Therapy (Medication). Includes prescription, administration, and monitoring of potential side effects of psychopharmacological medication.

24-Hour Inpatient Mental Health Care (24-hour). Mental health care provided in a hospital or in a designated area with a number of beds allocated for mental health services. The mental health beds are under the authority of a physician and offer 24-hour nursing coverage.

Residential Treatment With Mental Health Services (Separate Residential). Mental health care provided in conjunction with a specially assigned living arrangement for juveniles with mental health problems. These living arrangements can be in a separate building or in a designated unit. Examples of residential treatment programs include therapeutic communities and units for sex offenders, violent youth, or youth with specified mental health problems.

Mental Health Therapy/Counseling (Therapy). Psychotherapy or counseling provided by a licensed mental health professional on a scheduled or walk-in basis. Exclude informal counseling provided by facility staff and others with no formal mental health training. Exclude therapy/counseling provided in conjunction with mental health screening, mental health evaluation or appraisal, emergency services, 24-hour inpatient mental health care, and residential treatment with mental health services.

Table 1. Number and percent distribution of juvenile justice facilities and youth in facilities on one day, by type of facility

	Facilities		**Youth**	
Type of Facility	**Number**	**Percent**	**Number**	**Percent**
All facilities	2,798	100.0	112,951	100.0
Detention centers	501	17.9	29,158	25.8
Shelters	269	9.6	3,905	3.5
Reception/diagnostic centers	32	1.1	2,828	2.5
Group homes and halfway houses	1,022	36.5	14,850	13.2
Ranches/camps/farms	139	5.0	9,045	8.0
Residential treatment facilities	673	24.1	25,356	22.4
Training schools	162	5.8	27,809	24.6

Source: *1998 Inventory of Mental Health Services in Juvenile Justice Facilities*, from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services

Findings

Mental Health Services Availability in Juvenile Justice Facilities

Table 2 provides the national picture of mental health services availability to youth in juvenile justice facilities at the time of the survey. Ninety-four percent of all facilities provided access to any one mental health service, with a range of 81 percent of shelters to all reception/diagnostic centers (100 percent), and nearly all residential treatment facilities (99 percent). Note that aggregate data obscure the wide discrepancies in service availability by facility type.

Although screening and evaluation are considered the most essential services, in general, more facilities provided access to medication and emergency mental health services. Note that medication was either the first or second most commonly provided service within each facility type.

Across the board, the largely private community-based group homes and halfway houses were doing comparatively better in making the basic services available. Screening, considered by many to be the most critical mental health service, was routinely available for youth in 85 percent of the group homes and halfway houses. These settings were also very likely to provide access to evaluation (82 percent), emergency services (82 percent), medication (87 percent), and therapy (83 percent).

The issue of whether a youth should be screened each time he or she is moved to a different placement within the juvenile justice system may account for the low proportion (29 percent) of RTFs that provided access to screening; presumably youth were screened prior to these placements, which clearly focused on evaluation services. RTFs were the most likely facility type (87 percent) to provide access to evaluations by mental health professionals.

It appears that the facilities largely used for preadjudication purposes, detention centers, and shelters were less likely than other facility types to provide access to screening, evaluation, and therapy, perhaps reflecting their role as short-term facilities. However, detention centers stand out as doing comparatively better in providing access to emergency services; 85 percent of detention centers, known to have high rates of overcrowding and suicide, did make emergency mental health services available.

The longer term placements (RTFs, group homes and halfway houses, and training schools), where treatment is seen as a goal, were most likely to provide access to medication and therapy services.

Mental Health Services Availability in Facilities Where Youth Are From Different Service Sectors

The data base used to conduct this survey contained facilities housing youthful offenders, and children and adolescents placed by the mental health and/or social services/child welfare sectors. The placement of youth by different service sectors under one roof is attributable, among other factors, to the historical role of the juvenile justice system to help abused and neglected children and adolescents, and the contemporary trend toward privatization and its financial incentives to keep beds filled. In addition to RTFs, facility types likely to house young people placed by multiple sectors are shelters, group homes, and halfway houses.

Table 3 contains the results of services availability in these three settings, by the proportion of young offenders housed (less than 25 percent, 25 to 75 percent, and greater than 75 percent). It is presumed that facilities with fewer offenders may also house children and adolescents with mental, emotional, or behavioral health problems and/or those who have been abused and neglected and are at high risk for having these problems.

Overall, across the three facility types, it appears that facilities in the middle range (between 25 percent and 75 percent young offenders) were more likely to make mental health services available to the young people housed there. Regardless of the proportion of offenders, the large percentage of facilities providing access to medication services across all facility types, particularly in group homes and halfway houses and RTFs, was noteworthy.

Most RTFs in the survey (65 percent) largely housed young offenders. Although these RTFs were comparatively less likely than other RTFs to provide access to mental health services, over three-quarters of the RTFs with largely offender populations did provide access to evaluation (85 percent), emergency services (83 percent), medication (88 percent), and therapy (77 percent).

Note that facilities with the fewest offenders, perhaps what the mental health system calls residential treatment centers (RTCs) for emotionally disturbed children, were the most likely to provide medication (97 percent of facilities with fewer than

Table 2. Number and percent distribution of juvenile justice facilities providing access to mental health services, by type of facility and type of service

Type of facility	All Facilities	Type of Mental Health Service							
		Any Service	Screening	Evaluation	Emergency	Medication	24-hour	Separate residential	Therapy
				Number of facilities					
All facilities	2,798	2,639	1,796	2,064	2,257	2,288	967	1,039	1,932
Detention centers	501	467	358	280	425	371	136	86	217
Shelters	269	218	145	120	166	150	40	25	110
Reception/ diagnostic centers	32	32	24	26	25	29	13	11	19
Group homes and halfway houses	1,022	979	864	838	836	893	472	406	844
Ranches/camps/ farms	139	127	88	88	108	98	34	21	80
Residential treatment facilities	673	664	195	585	568	607	234	426	537
Training schools	162	152	124	128	131	141	23	65	126
				Percent distribution of facilities					
All facilities	100.0	94.3	64.2	73.8	80.7	81.8	34.6	37.1	69.0
Detention centers	100.0	93.2	71.4	55.8	84.9	74.1	27.1	17.2	43.4
Shelters	100.0	81.0	53.8	44.7	61.6	55.9	15.0	9.3	41.0
Reception/ diagnostic centers	100.0	100.0	75.0	81.0	76.8	91.4	40.2	33.9	59.9
Group homes and halfway houses	100.0	95.8	84.6	82.0	81.8	87.4	46.2	39.7	82.6
Ranches/camps/ farms	100.0	91.4	63.6	63.2	77.6	70.7	24.5	15.0	57.5
Residential treatment facilities	100.0	98.7	28.9	87.0	84.5	90.2	34.7	63.3	79.7
Training schools	100.0	93.8	76.5	78.8	80.9	86.9	14.0	40.1	77.8

Source: *1998 Inventory of Mental Health Services in Juvenile Justice Facilities*, from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services

25 percent offenders). RTCs have particular importance to the mental health system. According to the Surgeon General's Report on Mental Health (U.S. Department of Health and Human Services, 1999, page 171), youth who are placed in RTCs "clearly constitute a difficult population to treat effectively." After inpatient hospitalization, RTCs are the second most restrictive form of care for children with severe mental disorders (U.S. Department of Health and Human Services, 1999). Although used by only about 8 percent of treated children, they represent nearly 25 percent of the national outlay on children's mental health (U.S. Department of Health and Human Services, 1999).

There was no clear pattern of differences in services availability based on the proportion of young offenders in group homes and halfway houses. Among facilities serving mainly offenders, more than four out of five did provide access to the essential services of screening (87 percent) and evaluation (83 percent), emergency services (84 percent), and the treatments of medication (87 percent) and therapy (81 percent).

Although the majority of RTFs and group homes and halfway houses in the survey housed largely of-

Table 3. Percent of shelters, group homes and halfway houses, and residential treatment facilities providing access to mental health services, by type of service and proportion of offenders

		Proportion of offenders*		
Type of service	**All facilities**	**Less than 25%**	**25%–75%**	**Greater than 75%**
		Shelters		
	(n = 269)	(n = 99)	(n = 73)	(n = 97)
Any service	81.0	83.8	82.2	77.3
Screening	53.8	53.7	66.8	43.2
Evaluation	44.7	47.5	52.6	35.1
Emergency	61.6	61.7	61.4	60.8
Medication	55.9	55.2	61.4	51.7
24-hour	15.0	15.3	14.0	15.1
Separate residential	9.3	8.9	8.8	9.8
Therapy	41.0	48.6	42.0	31.8
		Group homes and halfway houses		
	(n = 1,022)	(n = 263)	(n = 157)	(n = 602)
Any service	95.8	94.4	97.0	96.0
Screening	84.6	78.6	86.5	86.7
Evaluation	82.0	77.1	86.0	83.2
Emergency	81.8	76.7	83.1	83.7
Medication	87.4	86.9	90.5	86.8
24-hour	46.2	42.2	52.0	46.4
Separate residential	39.7	39.1	52.0	36.8
Therapy	82.6	81.7	89.9	81.0
		Residential treatment facilities		
	(n = 673)	(n = 118)	(n = 115)	(n = 440)
Any service	98.7	100.0	100.0	97.9
Screening	28.9	19.9	16.2	34.7
Evaluation	87.0	89.0	91.7	85.2
Emergency	84.5	85.6	89.1	82.9
Medication	90.2	96.6	91.7	88.1
24-hour	34.7	37.7	44.5	31.4
Separate residential	63.3	70.8	84.3	55.9
Therapy	79.7	83.9	86.0	77.0

Source: *1998 Inventory of Mental Health Services in Juvenile Justice Facilities*, from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services

*On a one-day count.

Table based on 2,798 facilities.

fenders (75 percent or more offenders), shelters were more diverse at the time of the survey, possibly reflecting their preadjudication role. Slightly more than one-third of the shelters in the universe (36 percent) held mainly offenders. Across shelter types, those with the greatest proportion of offenders were the least likely to provide access to the essential services of screening and evaluation, or treatments (medication and therapy). Therapy was more likely to be available to youth in shelters with the fewest offenders; nearly half (49 percent) made it available.

Mental Health Providers in Juvenile Justice Facilities

Table 4 addresses the extent to which mental health professionals work within juvenile justice facilities and the disciplines of those who do. Note that group homes and halfway houses are excluded from this analysis because on-site staffing data were not collected for this facility type.

Overall, in approximately two-thirds of facilities, psychiatrists (61 percent of facilities), psychologists (69 percent of facilities), and/or providers with master's degrees in social work (M.S.W.) (61 percent of facilities) were available on site. With the exception of shelters, psychologists were the most commonly available discipline; Ph.D.s were more likely (56 percent of facilities) than those with master's degrees only (50 percent) to be represented.

Shelters were the facility type least likely to provide on-site access to mental health professionals. M.S.W. social workers were more likely to be available than psychologists (54 percent of shelters had on-site M.S.W. social workers, 50 percent had psychologists, and 32 percent psychiatrists). The longest term, most remote and secure facilities, RTFs and training schools, were more likely than other facility types to have on-site psychiatrists and psychologists.

Involvement of Other Sectors of Care in Making Mental Health Services Available to Young People in Juvenile Justice Facilities

Often, multiple agencies, providers, and families share responsibility for young people with mental, emotional, and behavioral health problems, and collaboration among these partners is deemed ideal. Tables 5 through 7 begin to explore relationships between juvenile justice facilities and other sectors of care in mental health services provision. The involvement of different partners is analyzed both by type of facility and by type of mental health service.

Table 5 examines the other sectors of care involved in paying for and/or providing mental health services to youth in juvenile justice facilities, by type of facility and type of source. Table 6 looks at these same facilities by type of mental health service. Group homes and halfway houses are excluded

Table 4. Percent of juvenile justice facilities providing access to mental health services, by facility type and discipline of on-site mental health professional

Type of facility	Number of facilities	Psychiatrist	Any psychologist			
			All	Ph.D. only	Masters only	Masters in Social Work
All facilities	1,193	60.6	68.7	56.4	49.6	61.4
Detention centers	456	61.0	70.4	58.2	50.3	67.1
Shelters	201	32.4	49.6	36.2	38.5	54.4
Reception/diagnostic centers	26	54.6	67.5	59.8	33.8	60.9
Ranches/camps/farms	108	47.7	56.4	47.0	34.6	47.7
Residential treatment facilities	257	76.5	78.0	64.6	56.5	64.6
Training schools	145	80.8	82.9	70.9	64.8	58.2

Source: *1998 Inventory of Mental Health Services in Juvenile Justice Facilities*, from the Survey and Analysis Branch, Division of Community and Systems Development, Center for Mental Health Services.

Excludes 979 group homes and halfway houses not asked this question. Table based on 1,193 facilities, the number providing at least one mental health service and completing the long form. (See technical appendix table C1 for detail.)

Facilities may be in more than one category; therefore, the total number of facilities is not the sum of the number of each type.

Table 5. Percent of juvenile justice facilities providing access to mental health services that received funds and/or mental health services from other source, by facility type and type of other source*

		Other source paying for/providing mental health service						
			Mental health system					
Type of facility	**Number of facilities**	**Juvenile justice system**	**Any mental health**	**Local (CMHCs)**	**State (agencies and hospitals)**	**Private psychiatric hospitals**	**Social service/ child welfare system**	**Family**
All facilities	1,193	62.7	46.9	31.2	28.9	12.5	40.1	34.2
Detention centers	456	80.3	58.1	44.4	33.7	16.8	43.3	49.0
Shelters	201	40.8	44.2	29.5	25.0	11.6	51.6	35.1
Reception/ diagnostic centers	26	50.5	45.2	34.6	20.8	20.7	7.7	15.4
Ranches/camps/ farms	108	55.0	45.6	27.9	15.3	9.8	24.3	20.8
Residential treatment facilities	257	58.2	40.2	21.0	31.2	9.0	51.3	26.8
Training schools	145	53.1	28.8	12.0	26.4	7.2	12.0	12.9

Source: *1998 Inventory of Mental Health Services in Juvenile Justice Facilities*, from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services

*Other sources can be involved in services provision in addition to or in lieu of services paid for and/or provided by the facility itself. Excludes 979 group homes and halfway houses not asked this question. Table based on 1,193 facilities, the number providing at least one mental health service and completing the long form. (See technical appendix table C1 for detail.)

CMHC = community mental health center or agency

from tables 5 and 6. They were asked where off-site mental health services were located. Results are presented in table 7.

Linkages Between Detention Centers, Shelters, Reception/Diagnostic Centers, Ranches/Camps/Farms, RTFs, and Training Schools and Other Sectors of Care

Table 5 shows that overall, where outside sources worked with juvenile justice facilities to make mental health services available to young people, these sources were most likely to be other parts of the juvenile justice system (63 percent of facilities), such as juvenile courts or attorneys. As might be expected because of their role in housing youth prior to adjudication, detention centers were most likely (80 percent of detention centers) to engage with other parts of the juvenile justice system. Shelters were the least likely facility type (41 percent of shelters) to work with juvenile justice sources.

Nearly one-half (47 percent) of juvenile justice facilities (excluding group homes and halfway houses) providing access to mental health services worked with mental health agencies or providers to make those services available. Overall, facilities were almost as likely to be involved with the local community (31 percent) as State mental health agencies and providers (29 percent). Note that RTFs and training schools, the most secure and remotely located facilities, were more likely to be involved with State than local mental health agencies, yet all other facility types were more likely to be involved with local community agencies or providers.

Specifically, detention centers were the most likely facility type (58 percent of detention centers) and training schools the least likely facility type (29 percent of training schools) to work with the mental health system to provide mental health services.

The overall role of social services/child welfare agencies in paying for and/or providing mental health services was almost as great as that of the mental health system; 40 percent of juvenile justice facilities worked with social service/child welfare agencies. Approximately one-half of shelters (52 percent) and RTFs (51 percent) interacted with the social service/child welfare system.

Families also played a relatively significant role in mental health services provision, particularly in the preadjudication settings of detention centers and shelters. Over one-third (34 percent) of facilities overall interfaced with families to make mental health services available. Nearly one-half (49 percent) of detention centers and over one-third (35 percent) of shelters reported that families were engaged in paying for or providing mental health services.

Table 6 presents the percentage of facilities (excluding group homes and halfway houses) that worked with sources outside of their facility to pay for and/or provide mental health services, by type of mental health service.

As presented previously in table 5, juvenile justice facilities were more likely to work with other parts of the juvenile justice system than with other sources; the exception to this, highlighted in table 6, was the relatively larger role of the mental health system in providing and/or paying for 24-hour inpatient mental health care, the most intensive mental health service available. Nearly one-half of all facilities providing 24-hour inpatient care (45 percent) did so with the help of the mental health system. In providing this service, facilities were more likely to work with the State (26 percent of facilities) than the local community mental health agencies (17 percent).

Approximately one-third of the facilities worked with mental health agencies to provide evaluation (33 percent) and emergency services (35 percent). These facilities are only slightly more likely to interact with the local community than State mental health agencies.

Also as noted in table 5, the overall role of the social service/child welfare system in providing and/or paying for mental health services was nearly as great as that of the mental health system. In the case of medication services, the social service/child welfare agencies played a larger role (28 percent of facilities) than mental health agencies (17 percent). Further, in nearly one-third of facilities (29 percent) that provided access to mental health services, families played a role in paying for or providing medication services.

Linkages Between Group Homes and Halfway Houses and Other Sectors of Care

Table 7 displays the responses to the question of where off-site mental health services were located for youth residing in group homes and halfway houses.

The mental health system, particularly local community mental health agencies, played a large role in providing off-site mental health services, greater than any other source, including other parts of the juvenile justice system. In over three-quarters (77 percent) of these facilities, mental health services were available through the mental health system. Local community mental health agencies were by far the most likely source to be working with youth, with one exception. This exception was the role of State mental health agencies and particularly private psychiatric hospitals in providing the most intensive service, 24-hour inpatient mental health care. Twenty-three percent of group homes and halfway houses worked with the State and 36 percent worked with the private sector in providing hospitalization.

Social services agencies, on the other hand, played a relatively small role in the provision of off-site mental health services, and families an even smaller role. Only 20 percent of facilities interacted with the former, and 8 percent worked with the latter.

Although findings from table 7 cannot be directly compared with findings from table 6 because of differences in questions, in general, interfaces between the juvenile justice system and the mental health system around providing mental health services for youth appeared to be more common in group homes and halfway houses than in other types of facilities.

Summary of Findings

On 1 day in 1998, nearly 75 percent of young people in juvenile justice facilities were fairly evenly distributed among three facility types—detention centers (approximately 29,000 youth), RTFs (approximately 25,000), and training schools (28,000). If one is seeking to develop or enhance mental health services that affect the greatest number of youth, these would appear to be the settings to focus interventions.

Detention centers were more likely to provide access to emergency mental health services (85 percent of detention centers) than screening (71 percent), evaluation (56 percent), or therapy (43 percent). Emergency mental health services can help to identify youth with mental health problems and prevent suicide, a problem in these overcrowded facilities; however, they are not a substitute for screening and evaluation services. Roughly comparable to jails for adults, detention centers appeared

Table 6. Percent of juvenile justice facilities providing access to mental health services that received funds and/or mental health services from other sources, by type of service and type of other source*

Type of service	Number of facilities	Source of mental health service						
			Mental health system					
		Juvenile justice system	Any mental health	Local (CMHCs)	State (agencies and hospitals)	Private psychiatric hospitals	Social service/ child welfare system	Family
Screening	932	48.9	25.1	15.8	14.2	4.2	22.6	13.6
Evaluation	802	47.3	32.8	21.2	17.5	6.3	25.6	14.2
Emergency	994	38.4	34.7	21.7	17.0	7.1	18.1	13.6
Medication	954	40.9	17.0	8.8	10.6	3.0	28.0	29.4
24-hour	274	26.0	45.0	16.9	26.3	14.2	21.7	22.7
Separate residential	328	39.4	28.6	13.6	20.0	6.1	30.5	16.7
Therapy	680	42.4	29.0	18.6	14.0	2.8	22.1	14.2

Source: *1998 Inventory of Mental Health Services in Juvenile Justice Facilities,* from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services

*Other sources can be involved in services provision in addition to or in lieu of services paid for and/or provided by the facility itself. Excludes 979 group homes and halfway houses not asked this question. Table based on 1,193 facilities, the number providing at least one mental health service and completing the long form. (See technical appendix table C2 for detail.

CMHC = community mental health center or agency

to be much less likely than jails to make mental health services available. A 1993 survey of local jail mental health services found that, nationwide, 84 percent of facilities provided access to screening, 73 percent to evaluation, 85 percent to medication services, and 66 percent to therapy (Goldstrom, Henderson, Male, & Manderscheid, 1998).

Young people were placed within some facility types, particularly shelters, group homes, halfway houses, and RTFs, from different service sectors. Mental health services appeared to be more widely available where there were not "too few" (25 percent or fewer) or "too many" (greater than 75 percent) young offenders housed under one roof. Providing prevention services in facilities housing youth with diverse problems might be considered.

Overall, RTFs and training schools, facilities geared toward long-term treatment, were indeed more likely to provide access to medication and therapy than other facility types. RTFs principally serving youth in the juvenile justice system (facilities with greater than 75 percent offenders) were more likely than other RTFs to provide evaluations by mental health professionals (85 percent of RTFs) and medication services (88 percent). Approximately three-quarters (77 percent) of these RTFs also provided therapy. In comparison with RTFs serving mostly youthful offenders, training schools, or "youth prisons," were more likely to provide screening (76 percent of training schools), yet a little less likely to make evaluation services available.

Access to a psychiatrist is deemed by some to be a measure of access to mental health services (Torrey et al., 1992) and is certainly important when a new prescription or continuation of psychotropic medication is indicated. Excluding group homes and halfway houses, of the 954 facilities that provided access to medication services and were asked the question about who prescribed the psychotropic and/or psychopharmacological medication, 83 percent reported that psychiatrists prescribed the medication. This finding may suggest that juvenile jus-

Table 7. Percent of group homes and halfway houses providing access to mental health services, by type of service and location of off-site source

		Off-site source of mental health service						
			Mental health system					
Type of facility	**Number of facilities**	**Juvenile justice system**	**Any mental health**	**Local (CMHCs)**	**State (agencies and hospitals)**	**Private psychiatric hospitals**	**Social service/ child welfare system**	**Family**
Any service	881	37.6	76.8	56.8	25.4	35.9	20.0	8.5
Screening	794	22.3	41.2	35.1	8.2	9.5	16.8	5.7
Evaluation	775	16.3	44.8	37.6	9.0	11.7	12.4	2.3
Emergency	781	18.4	56.8	33.6	13.0	25.0	5.1	1.1
Medication	814	7.3	37.0	31.6	5.1	9.4	3.0	3.2
24-hour	448	11.9	57.7	16.6	22.7	35.7	1.8	0.7
Separate residential	379	24.8	28.8	16.2	9.4	11.7	2.7	0.8
Therapy	784	7.9	46.7	41.3	7.4	9.5	8.8	1.3

Source: *1998 Inventory of Mental Health Services in Juvenile Justice Facilities,* from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services

Table based on 881 facilities, the number providing at least one mental health service and completing the short form. (See technical appendix tables C1 and C2 for detail.)

CMHC = community mental health center or agency

tice facilities were more likely to utilize psychiatrists to prescribe and/or monitor medication than is the practice in the general community, where pediatricians and other physicians do the same.

Over two-thirds of juvenile justice facilities, again excluding group homes and halfway houses, provided on-site access to psychiatrists, psychologists, and/or M.S.W. social workers. The most remote settings, RTFs and training schools, were the most likely to provide on-site staff. Shelters were more likely to make M.S.W. social workers than other mental health professionals available.

A key to serving youth with mental, emotional, or behavioral health problems is collaboration among the various agencies, providers, and families who share responsibility for their well-being. While willing collaboration is the ideal, in reality State or local laws might compel agencies, providers, or families to make contributions or provide services. The extent to which juvenile justice facilities work with other sectors of care to pay for and/or provide mental health services to youth in facilities may not be an accurate measure of collaboration; however, it is a measure of some linkage, ranging between a statutory requirement and true collaboration among partners.

Nearly one-half of juvenile justice facilities (47 percent of facilities, excluding group homes and halfway houses) worked with the mental health system to provide access to mental health services. Detention centers were the facility type most likely (58 percent) to work with the mental health system and with families (49 percent). Detention centers more commonly interfaced with local (44 percent) than State mental health agencies (34 percent).

RTFs and training schools were less likely than detention centers to work with the mental health system (40 percent and 29 percent, respectively), and when they did, it was more common for them to work with State rather than local mental health agencies. This finding could be related to these facilities' geographic locations, closer to State than local agencies, and/or to the more serious nature of the offenses for which youth are housed in these settings, accompanied by community providers' reluctance to work with them. It could also reflect the presence of mental health services within and under the auspices of the juvenile justice facility, obviating the need to rely on outside sources of care. Overall, more RTFs (51 percent) interfaced with social services/child welfare agencies than with mental health agencies to provide/pay for on-site mental health services.

Interface with the mental health system was most likely to occur around providing 24-hour inpatient mental health care. Forty-five percent of facilities providing this service worked with mental health agencies, most commonly the State (26 percent). About one-third of facilities linked in providing/paying for evaluation (33 percent) and emergency services (35 percent); these facilities were more likely to work with local than State mental health agencies. Medication services more commonly involved social services/child welfare agencies (28 percent of facilities) and families (29 percent) than mental health agencies.

In over three-quarters (77 percent) of group homes and halfway houses providing access to mental health services, mental health agencies and providers were involved. With the exception of the most intensive services (24-hour inpatient mental health care and separate residential settings for youth with these problems), youth in group homes and halfway houses received services through local, rather than State, mental health agencies. The private sector was more likely than the State to be involved in providing emergency services and 24-hour inpatient care.

Group homes and halfway houses housing largely juvenile offenders (more than 75 percent) were the facility type most likely to provide the essential mental health services of screening (87 percent of facilities), evaluation (83 percent), emergency services (84 percent), medication (87 percent), and therapy (81 percent). Among other factors, the greater availability of mental health services to youth in these largely offender facilities could reflect local availability of community-based mental health services, the juvenile justice system's responsiveness to local communities' demands for safety in their neighborhoods, and/or the option available to many of these largely private facilities to refuse to take all youth who have been referred. In any event, it appears that mental health services were more likely to be available to young offenders in the most homelike, community-based, rather than institutional, settings.

Shelters, particularly those housing more than 75 percent offenders, were the least likely type to provide mental health services, were the least likely type to provide on-site access to a psychiatrist or psychologist, and were more closely linked with social service agencies (52 percent) than mental health agencies (44 percent) in providing/paying for mental health services.

Limitations

Several caveats are associated with interpreting these data on the availability of mental health services to youth in juvenile justice facilities. First, while analyzing data by facility type makes good sense from a mental health policy perspective, problems are inherent in any self-classification system where there are no clearly agreed-upon definitions for facility types. Second, a short version of the form was specifically designed for group homes and halfway houses. Although this facility type represents over one-third of all juvenile justice facilities, their residents represent only about 13 percent of the entire population of children and adolescents in facilities. Because there were fewer items on the group home and halfway house form, some of the tables encompass only responses from the six other facility types. Therefore, the reader should refer appendix tables C1 and C2 to interpret results. Third, response rates vary across facility types. Appendix table C3 provides needed detail. Fourth, note that statistical tests have not been performed on differences contained in the tables. Therefore, differences may not be statistically significant. Fifth, this is the first time these data have been collected and analyzed, and, as such, they represent only a baseline from which to look at future trends. Although it may be tempting to compare these findings with local or State surveys, surveys of a particular facility type, or subsequent surveys, the reader is cautioned to use the same definitions of services and facility types when making comparisons across surveys. Sixth, because these data have not been collected before, it is difficult to attach any judgments to them. The availability of mental health services tells us little about whether they are used. Nor do the data tell us what *should be* available in facilities and how services are best provided. These data simply present a snapshot of the juvenile justice facilities at one point in time. Last, the availability of a service says nothing about its quality or outcomes for particular children and adolescents. Therefore, it does not respond to the question of adequacy of services raised by Amnesty International (1999). In order to examine that, longitudinal studies of individual children and adolescents (see Teplin, 2000) are also required.

Conclusions

The CMHS survey estimated that about 113,000 children and adolescents were in juvenile justice facilities on 1 day during the study period. Experts agree that about 20 percent of young people in the juvenile justice system experience serious emotional disturbances (Open Society, 2000), with perhaps up to 75 percent experiencing some mental, emotional, or behavioral health problem (National Mental Health Association, 1999, 2000). On the basis of these estimates, on a given day approximately 22,600 young people placed in juvenile justice facilities could have serious emotional disturbances and up to 84,750 may have some problem.

Whenever possible, youth with mental, emotional, or behavioral health problems should be diverted from the juvenile justice system (Cocozza & Skowyra, 2000). Of course it must also be acknowledged that there may be youth whose offenses are too serious to allow them to be diverted out into the community. Probation officers, court intake staff, and judges possess wide discretion about diverting children and adolescents out of the system or moving a case forward (Greenwood, 1984). Young people will be well served to the extent that these professionals have access to the most appropriate objective and gender-, race-, and culturally sensitive tools to screen each of them for mental, emotional, and behavioral health problems, places to refer them for mental health evaluations, if necessary, and appropriate and available treatment programs in the local community. The reality is, however, that although effective treatments such as Multisystemic Therapy (Henggler, 1997; Melton & Pagliocca, 1992) and Functional Family Therapy (Coalition for Juvenile Justice, 2000) exist, and the intentions of the juvenile justice, mental health system, and other sectors of care are good, many communities simply lack a range of available community-based mental health resources or appropriate residential placements for young people with mental, emotional, or behavioral health problems.

Except for detention, this survey did not examine mental health services availability during the early stages of court processing, prior to adjudication, where youth can be diverted out of the system. CMHS is currently funding a major program on diversion from the criminal justice system; perhaps a similar survey on juvenile justice system diversion activities would be helpful.

If youth are adjudicated delinquent and are placed in correctional facilities, the experts agree that the key for helping those with mental, emotional, or behavioral health problems is early identification, with mental health professionals rather than corrections staff as treatment providers (Coalition for Juvenile Justice, 2000). The National Commission on Correctional Health Care (NCCHC), as well as a host of other organizations (Woolard, Gross, Mulvey, & Reppucci, 1992), has developed voluntary standards for the juvenile justice system. These standards include minimum requirements for immediate screening on admission and immediate referral for evaluation by a qualified mental health professional for youth thought to be "suffering from serious mental illness" (NCCHC, 1999). Once youth are identified, if they are in relatively open community residential placements, such as shelters or group homes and halfway houses, hypothetically they could be linked to mental health services in the community. If they are in secure settings outside of their local communities, service needs might necessitate on-site staff and programs.

At least since the 1984 inception of the Child and Adolescent Service System Program (CASSP) system-of-care model of family-centered and community-based services for children and adolescents with mental, emotional, and behavioral health problems (Sondheimer & Evans, 1995), it has been clear that cross-system collaboration must form the basis of all solutions to helping young people; their needs cannot be placed at the doorstep of any one agency or system (Cocozza & Skowyra, 2000). Partnerships among all child-serving systems, providers, families, and youth are critical, whether efforts are geared toward prevention, diversion, services during juvenile court processing or in facilities, individualized discharge planning to ensure reintegration into the community with appropriate support services and treatment, or services designed to help youth make the transition to adulthood.

Indeed, significant strides have been made in collaboration among mental health, educational, child welfare and social services, juvenile justice, general health care, and substance abuse agencies at the Federal level in facilitating the delivery of integrated services to children and their families at the local level. Just a few recent examples are the Safe School/Healthy Student Program, Circles of Care Program, and the Comprehensive Community Based Mental Health Services Program for Children with Serious Emotional Disturbances and Their Families. A national youth policy, such as exists in England, would go even further toward fostering collaboration, currently impeded by short-term funding for problem-focused, categorical programs (Erickson, 2000). However, in the United States, where States and localities make their own policies about the young people they serve, it is ultimately at the local level where collaboration must be implemented (Privatization, 1998, remarks by John Petrila).

Local-level collaborative efforts are also becoming more evident. One excellent model, Milwaukee Wrap Around, pools local dollars across service sectors to "wrap" services, support, and supervision around children and their families through the implementation of an integrated multiservice approach to meeting needs in an individualized way (Kamradt, 2000).

In addition to pooling funds, local communities are experimenting with community assessment centers, joint teams of key service providers from the different sectors who conduct assessments and develop treatment plans, collaborative case management, and a host of other solutions. Case management can be seen as the glue to developing and holding together truly integrated services for individual young people. The present survey found that, excluding group homes and halfway houses, 78 percent of juvenile justice facilities report that they provide someone to work with the juvenile justice system to attempt to get charges modified or dropped for juveniles with mental health problems. Eighty-one percent of detention facilities report having this function. However, when respondents were asked whether youth with special mental health needs were assigned a different case manager or case management team from those without special needs, overall only 4 percent report that they "always" provide a different case manager or case management team and 2 percent "sometimes" provide this as a separate function. Detention centers and training schools, largely public facilities, are the mostly likely to either "always" or "sometimes" provide separate case management; 27 percent of the former and 41 percent of the latter report the availability of this service. When asked about who provides this case management service, in only about one-fourth or fewer facilities are mental health providers, either on- or off-site, involved. This function is largely within the realm of probation staff, juvenile corrections agency staff, or attorneys.

While collaboration does not require the creation of a single system, it does demand an interconnected network of organizations that can complement each other through the transfer of appropriate information, resources, and clients among components (GAINS Center, 1999). Currently, the transfer of appropriate information has not been broadly accomplished. The "trans-institutionalization" of "youth in trouble" (Lerman, 1991)—in juvenile justice facilities, residential treatment centers, psychiatric hospitals, or residential schools—makes it difficult to count or follow the many youth who spend their lives bouncing from system to system. The inability of our data systems to determine the extent of overlap in counts conducted in residential facilities within the different systems (Lerman, 1991) hampers our ability to examine trends and formulate rational policy for youth with mental, emotional, and behavioral health problems in each system. The Coalition for Juvenile Justice (2000) goes so far as to recommend building integrated (cross-agency) information systems. Certainly, the need for privacy and confidentiality in data systems and the avoidance of stigmatization toward young people using services are challenges to creating collaborative data systems. CMHS is currently tackling these and other complex data issues through its Mental Health Statistics Improvement Program and *Decision Support 2000+* initiatives.

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Chapter 19

Estimates of Mental and Emotional Problems, Functional Impairments, and Associated Disability Outcomes for the U.S. Child Population in Households

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Introduction

Estimating the prevalence of psychiatric disorders in youth has been a topic of intense interest in developmental epidemiology for several decades. Historically, difficulties in measurement have revolved around changing criteria that have accompanied the evolution of the *Diagnostic and Statistical Manual* from DSM–II, to DSM–III, DSM–III–R, and now DSM–IV (with DSM–V on the horizon). More recently, measurement issues have been affected by Public Law 102-321, the Alcohol, Drug Abuse and Mental Health Administration Reorganization Act (1992), of which Title II establishes a block grant for community mental health services for children with severe emotional disturbance (SED). This law required the Center for Mental Health Services (CMHS) to establish the definitions for the term SED. The resulting definition of SED requires children to have a psychiatric diagnosis (excluding V codes, substance abuse, and developmental disorders occurring in the absence of another diagnosable disorder) and substantial impairment in family, school, or community activities. Adding an impairment indicator was meant to distinguish between children with psychiatric disorders that significantly affected their ability to function in their environment and those having only mild impairments. According to these criteria, youth can be divided into four categories: (1) Children without diagnosis or functional impairment, (2) children with functional impairment but no diagnosis, (3) children with diagnosis but no functional impairment, and (4) children with diagnosis and functional impairment. These categories form a structure for analyzing population-based health survey information.

This chapter presents data from the National Health Interview Survey on Disability (NHIS-D; conducted in 1994–96) that describes the U.S. population of children with reported mental, emotional, and behavioral problems and functional limitations as well as associated consequences found in limitation of school activities, school days missed, reported health status, and service utilization. Children were first divided into two major groups: a Disability Group containing youth identified as having reported mental/emotional problems and functional limitations; and a Reference Group composed of youth who were not identified as having problems/limitations. Then, using the structure set by SED criteria, the Disability Group was subclassified into three mutually exclusive categories of functional limitation only (FL Only); mental, emotional, or behavioral problem only (M/E Only); and mental, emotional, behavioral problem *and* functional limitation (M/E + FL). First, total prevalence of children in the Disability Group is reported, followed by a graphical representation of FL Only, M/E Only, and M/E+FL distributions within the Disability Group. Second, the Disability Group is compared to the Reference Group by examining population distributions among sociodemographic characteristics. Third, demographic characteristics of children within each of the Disability Group subclassifications are presented. Fourth, the Disability Group is compared to the Reference Group according to disability outcomes of school activity limitation, number of school days missed, and health status. Finally, service utilization of the Disability Group is presented.

Data and Methods

Data Source: The NHIS is an annual household survey that collects detailed health information from the civilian, noninstitutionalized population of the United States. It is conducted by National Center for Health Statistics, Centers for Disease Control and Prevention. The NHIS-D is a survey that was designed specifically to collect data that could be used to understand disability and to provide baseline statistics regarding the prevalence and effects of disabling conditions. In order to accomplish its goal of collecting comprehensive information, the NHIS-D was designed to be administered over 2 years, with each year consisting of two phases of data collection. Phase I gathered information about all members of the sample households. This questionnaire collected basic data on disability that was then used as a screening device to determine eligibility for the Phase II questionnaire, which collected finer details about disability with regard to function, family impact, and use of services. Phase I data were collected in 1994 and 1995; Phase II data were collected 1 year after each Phase I survey (National Center for Health Statistics, 1997, 1998). Thus, the data collection period for the NHIS-D spanned from 1994 to 1996. Combined, Phase I data were collected on 205,560 persons; 41,100 of the sample were school-age children.

Respondents: Information about children was gathered by using responders who were adults who were most familiar with the health of the child. A total of 91 percent of the respondents were parents. This study is limited to children between the (school) ages of 5 and 17. Children reported to have mental retardation or Down's Syndrome were not included in this analysis.

Definitions

Mental/Emotional Problem

The presence of mental/emotional problems was operationalized using two questions from the Phase I portion of the NHIS-D: "Does your child have a problem or delay in mental/cognitive development?" and "Does your child have a problem/delay in emotional/behavioral development?" Children with a yes response to one or both of these questions were placed in the Disability Group.

Functional Limitation

Functional limitation was defined using four variables from Phase I.

> "Does your child have *significant* problems at school with paying attention in class?"

> "Does your child have *significant* problems at school with controlling behavior?"

> "Does your child have *significant* problems at school with communicating with others?"

and

> "Because of a physical, mental, or emotional problem, does your child now have any difficulty playing or getting along with others his/her age?" Children who have difficulty getting along with others because of a physical problem were controlled for by including only those who had also been identified as having a mental/emotional problem.

Children with a yes response to one or more of these questions were placed in the Disability Group.

Disability Outcomes

Disability Outcomes are defined by limitations in school activities, number of school days missed in the past 2 weeks, and a global rating of health status. The Limitation in School activities variable has four response categories ranging from No Limits to Unable to Attend/Limited Attendance in School. Number of School Days missed in the past 2 weeks has a range of 0–10, which was divided into categories of 0 days missed, 1 day missed, and 2 or more days missed. Health Status is measured along a five-level scale that ranges from Excellent to Poor health.

Service Utilization

Information about service usage was collected in Phase I and Phase II. Twelve types of services are grouped into four categories. The first category, "Now Sees a Mental Health Provider," is measured using a single item asked of all children in Phase I, "Does your child now go to a counselor, psychiatrist, psychologist, or social worker on a regular basis?" The remaining 11 types of services come from questions in Phase II and are asked only of children in the Disability Group. The reference period for receiving these services is 1 year (i.e., Did your child receive _____ services in the past 12 months?). Three categories were created: Therapeutic Services (physical therapy, occupational therapy, speech therapy, and recreational therapy); Home-Based Medical Services (visiting nurse, personal care assistant, interpreter, physician home visit, and transportation services); and Social Services (social work services and independent living assistance).

Demographic Variables

Demographic characteristics of sex, age, race/ethnicity, family structure, poverty status, and Metropolitan Statistical Area (MSA) were examined. The identified 5- to 17-year-old age range was divided into 2-year age groups except for the 17-year-old category, which represents 1 year. Two variables provided information for Race/Ethnicity classifications. First, a Hispanic ethnicity variable was used to identify Hispanic children, and then a race variable was used to classify all non-Hispanic children into white, non-Hispanic; black, non-Hispanic; and other, non-Hispanic categories. Thus, persons who reported Hispanic ethnicity and white race were classified as Hispanic, while those who reported they were not of Hispanic ethnicity but were white race were classified as white, non-Hispanic, and so on. Family structure covers four categories: two-parent families, mother-only families, families that have a mother and another adult living in the home, and 'other' category, which encompasses the rest of the possible configurations such as father-only families, families with grandparents acting as parents, and foster families. The Poverty Status variable was calculated using family income and family size information along with the appropriate poverty levels derived from the 1994 and 1995 U.S. Census Bureau Current Population Survey. For this analysis, four poverty indicator categories were generated: (1) below 100 percent poverty (representing the very poor); (2) 100 percent–199 percent poverty (representing the near poor); (3) 200 percent+ poverty level (representing the not poor); and (4) Unknown (representing the percentage of the population that did not supply any income information). MSA is a variable created by the NHIS to describe the type of areas respondents live in. It is divided into three categories: MSA-Central City, MSA not Central City (i.e., suburbs), and Not MSA (i.e., rural or small-town areas).

Results

Prevalence and Distribution of the Disability Group

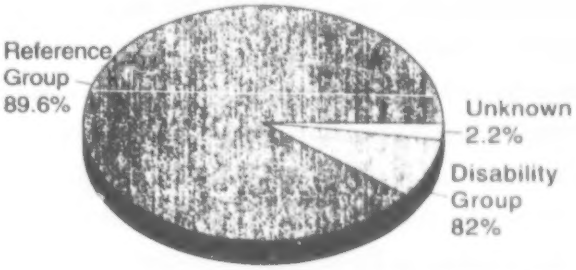

Figure 1. Percentage of youth 5–17 years old in Disability Group and Reference Group

Figure 1 shows that 8.2 percent or 4.1 million children in the civilian, noninstitutionalized population of the United States have a reported mental/emotional problem and/or functional limitation (the Disability Group). Figure 2 illustrates that within this Disability Group, 54.3 percent (2.2 million) have FL Only, 12.9 percent (529,000) have M/E Only, and 32.8 percent (1.3 million) report M/E + FL.

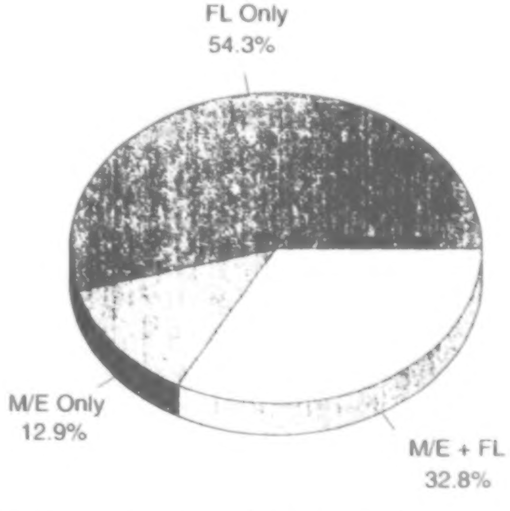

Figure 2. Disability population: type of impairment(s)

Demographic Characteristics of the Disability Group and the Reference Group

Table 1a shows the demographic characteristics of children in the Disability Group and the Reference Group. In this table, estimated numbers of children in each demographic category are listed first, followed by the population distributions and standard errors within each level of the demographic categories. This allows for comparison of the Disability Group to a standard nondisabled population.

In general, a greater proportion of boys are found in the Disability Group, and an age curve that peaks at 9 to 10 years old is evident. There is a higher proportion of black, non-Hispanic children in the Disability Group as well as children from families that do not contain two parents, with a particularly high proportion coming from single-parent (mother) families. Children in the Disability Group are disproportionately represented in the "less than 100 percent poverty" level, with a less, but still notable, difference in the 100–199 percent poverty range. Among the MSA categories, a greater proportion of the Disability Group is found in the Central City category.

Demographic Variations Within the Disability Group

Table 1b displays the Disability Group broken into the subclassifications FL Only, M/E Only, and M/E + FL. Again, estimates of the number of children falling into each demographic category are listed in the first column with population distributions listed in the second column. The focus of this table is the within-group variation among the three subclassifications. Since this table presents only data on the Disability Group (8.3 percent of the total 5- to 17-year-old population), the numbers within each cell are much smaller, especially in the M/E Only subclassification. Cells that do not meet standards for precision are noted. The data show that boys are concentrated in FL Only and M/E + FL. Among the age categories, the proportions peak at 9–10 years old in the FL Only and M/E Only subgroups; however, proportions in M/E + FL are highest at 11 and 12 years. Within the Race/Ethnicity variable, a greater proportion of white, non-Hispanic children are in M/E+FL while a slightly higher proportion of black, non-Hispanic children are in FL Only. Other notable within-group variations are found in the Mother Only Family Structure category, where children are more heavily distributed in the M/E and the M/E+FL groups. Among households living in poverty, a greater proportion of children are found in the M/E Only group; children from near-poverty households are more heavily distributed in the M/E+FL; and children who are not living in poverty are more likely to be found in FL Only. Finally, among children living in Central City areas, a higher proportion is found in M/E+FL.

Disability Outcomes

Table 2 presents data that allow comparisons of the Disability Group to the Reference Group on Disability Outcomes. Within the Disability Group 40 percent of the population is distributed among the three types of limitation categories, with the highest concentration in the "Attends or needs special school/classes" category. Comparatively, less than 5 percent of the Reference Group has a limitation in school activity. Similarly, children in the Disability Group missed more days of school than children in the Reference Group. Large differences between the groups are seen on the Health Status variable with 7.4 percent of children in the Disability group categorized as having Fair to Poor Health, while 2.1 percent of the Reference Group are so classified.

Service Utilization

Table 3 shows that 19.2 percent of children in the Disability Group are currently seeing a mental health provider (counselor, psychiatrist, psychologist or social worker) on a regular basis compared to 1.1 percent of the Reference Group that receives this service. Using a reference period of the past year, 10.8 percent of the Disability Group received Therapy Services, while 3.8 percent received Home Health Services and 5.8 percent received Social Services.

Discussion

Using the data from the NHIS-D, a household health survey, four categories were constructed following the structure set by SED criteria. In lieu of rigorous diagnostic information, children having reported mental/emotional/behavioral problems and/or having significant difficulty in an identified functional area were examined. While the data from the

NHIS-D do not accommodate calculating national estimates of children with psychiatric diagnosis, Goodman (1999) has found that asking parents a single question about the presence of mental/emotional/behavioral problems captures a significant portion of the clinical psychiatric population.

Disability Group Identification

We found that 8.3 percent of children in the civilian, noninstitutionalized U.S. population were identified by the Disability Group criteria as having a mental/emotional problem and/or functional limitation. In this study, FL Only is the largest Disability Group subclassification, accounting for over half of the Disability Group. In order to identify the group of children with functional impairments only, the Functional limitation variables were included as identifying criteria for the Disability Group. Theoretically, children experiencing significant problems with attention, behavior, or communicating in school are likely to be at greater risk for having a mental/emotional disorder than children who don't have these problems, because most children exhibit behavioral symptoms of psychiatric disorder before actually being diagnosed. Thus, the FL Only subgroup may be considered a population that is at risk for mental/emotional disorders. It is important to note that the functional limitation variables available in the NHIS-D are not exhaustive and include only limitations that affect school functioning and disturbances in social interaction. While school encompasses a large portion of a youth's hours, many problems may negatively impact family and/or community life more than school life; thus functional limitations are likely underrepresented here.

Accounting for 32 percent of the Disability Group, the M/E+FL group has both types of problems, and may more closely mirror a severely emotionally disturbed population; however, since the impairment questions are not directly linked to the mental, emotional, behavioral problem questions, this group may have an M/E problem that manifests itself in a functional limitation, or an M/E problem and a separate functional impairment.

The M/E Only subclassification yielded the smallest proportion (12.9 percent) of the Disability Group. Children identified as having M/E Only do not exhibit any of the functional impairments identified. This group represents children who have a mild M/E problem only.

Given the definitional parameters of the identified Disability Group, the 8.3 percent prevalence estimate is likely to be lower than estimates established using full-spectrum diagnostic and functional impairment measures. Indeed, child psychiatric epidemiology literature suggests that the prevalence of SED is between 9 percent and 19 percent, depending on criteria used to establish diagnosis and functional limitation and the reference period (i.e., 3 months, versus 6 months or 1 year) (Friedman, Kutash, & Duchnowski, 1996).

The Disability Group as a whole is predominately male, the data illustrating that mental/emotional problems experienced by girls are less likely to be accompanied by the functional limitations identified here. This pattern is also seen in the literature: 60 percent to 79 percent of the youth population that receive mental-health-related services are male (Freidman et al., 1996). It is not certain whether girls are less troubled than boys, if boys tend to exhibit more disruptive behavior and therefore are more readily identified, or if questions used to measure the impact of mental/emotional problems on girls' functional levels are amiss. If the last were true, it would help to explain why the tides turn once children become adults and women are more likely to be identified as having mental/emotional problems.

The 7- to 10-year-old category carries a larger proportion of children in the Disability Group with proportions leveling off after 11 years old, becoming similar to the proportions in reference population. This age curve may reflect that the problems/limitations children develop during latency years do not always persist into the teenage years. Followup studies indicate that less than half of children (27 percent to 43.5 percent) with mental/emotional disorders still have disorders 4 years later (Ferdinand, Verlhulst, & Wiznitzer, 1995; Offord et al., 1992), but that persistence increases with multiple diagnoses (Costello, 1999).

The age spectrum within the disability subclassifications shows an interesting pattern. While children arrive at school with proportionally fewer identified problems and/or limitations, this quickly changes. Functional limitations begin to emerge rather rapidly (ages 7 to 10), coexistent functional limits and mental/emotional problems follow suit (7 to 12 years), and identification of mental/emotional problems without functional limitation peaks at 9 to 10 years. Thus, these data reflect that children who have an M/E problem along with functional limitation tended to be identified earlier than children with M/E only.

Within the Disability Group emerges distinct patterns among race/ethnicity, family structure, poverty, and MSA. Viewed separately, higher pro-

Table 1a. Estimated number and percent distribution of children in the Disability Group and Reference Group by selected characteristics (U.S. civilian noninstitutionalized population ages 5–17 years*)

	Disability Group		Reference Group	
	(000)	**%**	**(000)**	**%**
Total Prevalence		89.0		8.3
Gender				
Male	2,763	67.3	22,088	49.6
Female	1,343	32.7	22,486	50.6
Age				
5–6	502	12.2 (.59)	7,352	16.5 (.21)
7–8	732	17.9 (.73)	6,889	15.5 (.20)
9–10	747	18.2 (.70)	6,776	15.2 (.19)
11–12	681	16.6 (.67)	6,845	15.4 (.19)
13–14	625	15.2 (.65)	6,819	15.3 (.20)
15–16	604	14.7 (.65)	6,709	15.0 (.20)
17	214	5.2 (.41)	3,183	7.1 (.15)
Race/Ethnicity				
White NH	2,625	63.9 (1.1)	29,186	65.5 (.49)
Black NH	811	19.8 (.99)	6,554	14.7 (.38)
Hispanic	476	11.6 (.62)	5,992	13.4 (.32)
Other	193	4.7 (.45)	2,841	6.4 (.23)
Family Constellation				
Two parents	2,500	61.0	33,469	75.3
Mother only	1,104	27.0	7,164	16.1
Mother and other adult	183	4.4	1,633	3.7
Other constellation	310	7.6	2,166	4.9
Poverty Status				
Below poverty	1,144	27.9	7,866	17.7
100%–199% poverty level	1,080	26.3	9,930	22.3
200% + poverty level	1,513	36.8	21,949	49.2
Unknown	368	9.0	4,829	10.8
MSA				
Central City	1,303	31.7 (1.1)	12,502	28.0 (.55)
MSA, not Central City	1,863	45.4 (1.2)	22,237	49.9 (.62)
Not MSA	938	22.9 (1.0)	9,835	22.1 (.49)

* Children with mental retardation or Down's Syndrome not included in this analysis.

[a] Some percentages total less than 100 because values for Don't Know, Refusal, and Not Ascertained are not listed.

[b] Cell contains small numbers; does not meet standard of reliability or precision.

Table 1b. Number and percent distribution of Disability Group subclassifications by selected characteristics

Functional Limitations Only (FL Only)		Mental/Emotional Problem Only (M/E Only)		Mental /Emotional Problems + Functional Limitations (M/E + FL)	
(000)	%	(000)	%	(000)	%
1,518	68.1 (1.2)	284	53.6 (2.6)	961	71.4 (1.5)
712	31.9 (1.2)	245	46.4 (2.6)	386	28.6 (1.5)
270	12.2 (.78)	75	14.3 (1.7)	156	11.6 (1.0)
398	17.9 (1.0)	87	16.5 (1.8)	247	18.4 (1.2)
414	18.6 (.93)	94	17.8 (1.8)	238	17.7 (1.3)
356	16.0 (.88)	69	13.2 (1.7)	255	19.0 (1.3)
350	15.7 (.88)	67	12.6 (1.7)	208	15.5 (1.1)
336	15.1 (.89)	86	16.3 (1.9)	182	13.5 (1.1)
105	4.7 (.52)	48	9.3 (1.4)[b]	59	4.4 (.72)[b]
1,388	62.3 (1.4)	333	62.9 (2.7)	903	67.1 (1.7)
457	20.5 (1.3)	99	18.8 (2.1)	255	18.9 (1.5)
272	12.2 (.8)	66	12.5 (1.6)	138	10.2 (1.0)
113	5.1 (.6)	30[b]	5.7 (1.3)[b]	50[b]	3.7 (.7)[b]
1,383	62.1 (1.4)	328	62.0 (2.7)	790	58.8 (1.7)
571	25.6 (1.3)	151	29.0 (2.5)	383	28.5 (1.6)
106	4.8 (.6)	14[b]	2.7 (.88)[b]	62	4.7 (.7)
166	7.5 (.7)	36[b]	6.8 (1.4)[b]	108	8.0 (.9)
606	27.2 (1.3)	165	31.2 (2.6)	373	27.7 (1.6)
557	25.0 (1.2)	137	25.9 (2.5)	386	28.7 (1.6)
847	38.0 (1.4)	184	34.7 (2.7)	482	35.8 (1.7)
221	9.9 (.9)	43[b]	8.2 (1.5)[b]	105	7.8 (.9)
706	31.7 (1.4)	159	30.0 (2.4)	439	32.6 (1.7)
1006	45.1 (1.5)	246	46.5 (2.9)	611	45.4 (1.9)
518	23.1 (1.3)	124	23.5 (2.5)	296	21.9 (1.6)

Table 2. Estimated number and percent distribution of Disability Group and Reference Group by health status and activity limitations (U.S. civilian noninstitutionalized population ages 5–17 years)

	Disability Group		**Reference Group**	
	(000)	**%**	**(000)**	**%**
Overall Disability Estimates	4,044	8.3	45,073	89.6
Health Status				
Poor	57	1.3	105	0.2
Fair	245	6.1	871	1.9
Good	1,146	28.3	7,521	16.7
Very Good	1,128	27.9	12,588	27.9
Excellent	1,472	36.4	23,982	53.2
Limitation of School Activities				
Unable to attend/limited attendance at school	225	5.2	571	1.3
Attends or needs special school/classes	1,302	30.6	669	1.5
Limited in other activities	183	4.2	895	2.0
Not limited	2,590	60.0	42,450	95.2
School Loss Days—past 2 weeks				
2 or more days missed	293	6.7	1,690	3.7
1 day missed	248	5.7	1,830	4.0
0 days missed	3,818	87.6	41,864	92.2

portions can be seen in black non-Hispanic youth, children from single-parent (mother) families, children from families living in poverty and near poverty, and children living in the central city. What is not clear from these data are the interaction effects of these demographics: that is, which variables, when controlled for by all the others, have significant value as an independent risk factor for mental/emotional problems and/or functional limitation. Poverty alone has been identified as a powerful risk factor, so much so that an algorithm for making state SED estimates includes an adjustment by State income levels (Friedman et al., 1996). Further investigation of these interaction effects is planned.

The impact or burden of having a disability is often measured according to its interference in normal life. From the NHIS-D, information about school limitations, number of days lost from school, and overall health status was used to describe the burden imposed by the disabilities highlighted. Costello (1999) points out that standard measures of disability such as these may not be the most appropriate to measure impact of mental/emotional disturbances as they are designed to capture outcome from medical illness, not mental/emotional illness. The impact of child mental disability is best measured in ways that quantify effects on families such as inability to work/reduced hours of work secondary to having to care for the child, family friction, and social isolation. Despite the potential to miss some facets of impact, findings indicate that children in the Disability Group attend or need more special education services and miss more days of school and are ascribed poorer health status than the Reference Group. With the exception of seeing a mental health provider and receiving social services, the other therapeutic and home health services may be more of a physical disability services measure. About one-fifth of the children in the Disability Group reported seeing a mental health professional, while only 10 percent or fewer were receiving the other services outlined.

Table 3. Percent distribution of service usage by disability status
(U.S. civilian noninstitutionalized population ages 5–17 years)

	Disability Group		**Reference Group**	
	(000)	**%**	**(000)**	**%**
Now sees mental health provider	834	19.2	497	1.1
Therapy Services, past 12 months[a]	469	10.8		
Home Health Services, past 12 months[b]	167	3.8		
Social Services, past 12 months[c]	253	5.8		

[a] Therapy Services = Occupational, Physical, Recreational, Speech Therapy services
[b] Home Health Services = Visiting Nurse, Personal Care Attendant, Doctor Home visit, Interpreter, Transportation Services
[c] Social Services = Social Work or Independent Living Services

Limitations

This is a secondary analysis of data from a household survey on disability. The format used here was based on the classification structure for SED; however, it departs from true SED in several important ways. First, presence of a mental/emotional problem is established via parent report, not by clinical diagnosis as required by SED criteria. Next, impairment is quantified within only one domain and is not causally linked to the mental/emotional problem variables. For SED, impairment can be noted in multiple domains such as home, school, and/or community and the impairment must have some association with the given diagnosis. The fact that parents are asked if their child has a *significant* impairment in attention, behavior, or communication at school likely weeds out many children who would be considered to have mild difficulties; however, these data do not allow further inquiry as to the nature of these problems, nor to the presence of a clinical disorder.

Conclusions

The largest value of this analysis lies in its ability to compare a population of children who have mental/emotional and/or functional problems with a reference population that does not have such problems. The sample is representative of the U.S. noninstitutionalized, civilian population, meaning the results are generalizable to the United States as opposed to applying only to a specific community or study site that has not used a probability sampling technique. While proportional distributions alone cannot establish characteristics as risk factors, the proportions reported here mirror others' findings that boys and children living in poverty are more likely to be identified as having a mental/emotional disturbance. One contribution this analysis may make is in its discovery that a disproportionate number of 7- and 8-year-old children were identified by the disability variables. Many epidemiological studies focus on the 9- to 17-year-old population. Future studies may want to consider extending their sample to include younger children.

The refinement of structured diagnostic tools and measures of impairment is currently under way within psychiatric epidemiology. Survey methodology is also expanding and making full use of technological advances and questionnaire design techniques to enhance the validity and reliability of the data it collects. Future surveys of child mental health will benefit from these collective advances and will be a rich data source for research and policymaking communities.

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Chapter 20

Mental Health Practitioners and Trainees

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Late in 1987, research staff from the American Psychiatric Association, the American Psychological Association, and the National Association of Social Workers and representatives of professional psychiatric nursing formed a work group on human resources data with staff from the National Institute of Mental Health (Dr. Manderscheid). This work group had several major purposes:

- To identify common, core data that could be reported on human resources by each of the four core mental health disciplines;
- To prepare a chapter for *Mental Health, United States, 1990* (National Institute of Mental Health, 1990) that presented and described these data;
- To identify data gaps and plan steps by which these gaps might be corrected; and
- To improve survey comparability among the four core disciplines so that the essential pool of common core data could be expanded.

The work group has addressed each of these purposes: a common, core data set was developed and published in *Mental Health, United States, 1998* (Center for Mental Health Services, 1998); chapters were developed on human resources for *Mental Health, United States, 1990, 1992, 1996,* and *1998* (National Institute of Mental Health, 1990, and Center for Mental Health Services, 1992, 1996, and 1998, respectively); and a plan was developed to fill data gaps and to improve data comparability for the professions that provide mental health services. In addition to the four core disciplines (psychiatrists, psychologists, social workers, and psychiatric nurses), early in the 1990's, representatives of clinical mental health counseling, marriage and family therapy, and psychosocial rehabilitation were added to the work group. More recently, representatives of school psychology and sociology have also been added.

The present chapter is designed to update information contained in the 1990, 1992, 1996, and 1998 chapters. It presents information on the size and characteristics for eight of nine disciplines (data are not available for sociology). Results are restricted to those data elements that are comparable across the disciplines. Exceptions to this general approach are noted in the footnotes and in appendix D. Readers are encouraged to review this appendix for descriptions of the survey methodologies used to collect the data reported here. Clearly, a strong need exists in the mental health field for increased precision and comparability of human resources data. Because mental health is a very labor-intensive field, with the preponderance of financial resources spent in this area, the policy and resource implications of human resource data are enormous. To plan adequately for future services, both the public and private sectors require access to such data. In this context, the present chapter is another step along a path that is of potential benefit to the entire field.

At the outset, it is important to specify the scope and limitations of the data. The reader needs to be sensitive to data coverage both within and across disciplines, as well as over time.

The chapter addresses two types of human resources:

- *Clinically trained mental health personnel.* Professionals who, because of recognized formal training or experience, could perform direct clinical mental health care, whether or not they are doing so at present.
- *Clinically active mental health personnel.* Professionals who are currently engaged in the provision of direct clinical mental health care (a subset of total mental health personnel).

The numbers of clinically trained mental health personnel and clinically active mental health personnel are specified only for professionals from the eight mental health disciplines. Other groups are not considered in this report. The reader should note that clinical supervision of trainees is considered to be a direct clinical activity. When possible, coverage includes an entire discipline, rather than the membership of a professional association. The analyses for each discipline specify the scope of coverage. Timeframes for the statistical information vary somewhat from discipline to discipline. The reader should note the variability within and across disciplines.

Psychiatry

This section describes the current workforce in psychiatry. Demographic and training characteristics, as well as professional activities and settings, are emphasized.

Data sources for this chapter include the American Medical Association (AMA) *Physician Characteristics and Distribution in the United States*

(2000); the 1999 membership records of the American Psychiatric Association (APA) (see Appendix D for description); the 1990–91 through 1998–99 APA Annual Census of Residents; the 1988–89 APA Professional Activities Survey (PAS); and the 1998 APA National Survey of Psychiatric Practice (NSPP) (see appendix D for description). The AMA data contain information on all physicians practicing in the United States who are self-designated or self-identified as psychiatrists. As a result, the AMA data may include some physicians with no specialty psychiatric training. In comparison, the APA data, which supplement the AMA estimates by providing data not otherwise available, include only board-eligible or board-certified psychiatrists. It should be noted that the APA data do not represent the universe of psychiatrists in the United States. The membership of the APA does, however, include a significant majority of the Nation's trained and practicing psychiatrists (approximately 85 percent) (West, Zarin, and Pincus, 1997).

Demographic and Training Characteristics

The AMA (2000–2001) reported that in 1998, there were 40,731 clinically active psychiatrists (including child psychiatrists) in the United States, reflecting a 40.4 percent increase in the number of psychiatrists since 1982 and a 3.9 percent increase since 1996 (Table 1). Table 2 provides data on the basic demographic characteristics of the clinically trained APA members residing in the United States. In 1999, approximately 73 percent of APA members were male and 27 percent were female, a slight increase from 1996 (Center for Mental Health Services, 1996). In 1999, the median age of APA members was 53 years. The median age of female APA members was 47 years compared with a median age of 56 years for male APA members. Female members who are 39 years old or younger comprise 20.2 percent, compared with only 9.3 percent for male members. Female APA members who are under the age of 50 comprise 59.8 percent, compared with 33.2 percent for male APA members.

Psychiatrists who are white comprise 75 percent of APA members, compared with 83 percent of all persons in the general population (U.S. Bureau of the Census, 1995). Individuals of Asian origin represent 9.5 percent of the APA membership and 3.2 percent of the general population On the other hand, Hispanics, African Americans, and American Indians are underrepresented in the APA membership when compared with their proportions in the U.S. population. Persons of Hispanic descent account for 4.4 percent of the APA membership and 10.0 percent of the general population, African Americans comprise 2.4 percent of the APA membership compared with 12.5 percent of the general population, and American Indians constitute 0.1 percent of the APA membership and 0.8 percent of the general population.

Table 3 reports the number and rate per 100,000 in the population of clinically active nonfederal psychiatrists practicing in the United States in 1998, based on data reported by the AMA. There are approximately 14.2 clinically active psychiatrists per 100,000 individuals in the U.S. population. The distribution of clinically active psychiatrists, however, varies across geographic regions, ranging from 6.2 per 100,000 in Idaho, and 6.0 per 100,000 in Mississippi, to 30.3 per 100,000 in New York, 32.5 per 100,000 in Massachusetts, and 64.6 in the District of Columbia.

During the 1980's the number of medical students entering psychiatric residencies increased by almost 25 percent (Dial et al., 1990). However, data from the APA annual *Census of Residents* indicate that since 1990, the number of residents has remained relatively constant (Table 8). Nonetheless, there continues to be a steady increase in the proportion of female residents. In 1998–99, 53 percent of psychiatric residents were male and 47 percent were female, compared with 56 percent and 43 percent respectively in 1990–91.

Since 1990, there has been a 63 percent increase in the proportion of international medical graduates (IMG's) entering psychiatric residencies (APA Census of Residents 1990–1998). The greatest increase occurred during the early to mid-1990's, with the proportion increasing 91.6 percent between 1990 and 1996. In recent years, it appears that this trend has slowed and begun to reverse itself, as demonstrated by the 15 percent decrease in proportion of IMG's between 1996 and 1998. Furthermore, in the past 4 years the proportion of Hispanic residents decreased slightly and the proportion of Asian residents increased slightly, while the proportions of whites, African Americans, and American Indians remained relatively constant. It is important to note, however, that where the previous census data had 100 percent responding to this question, only 84.3 percent chose to categorize themselves by race/ethnicity in the 1998–99 census.

Professional Activities

Data from the 1998 APA NSPP (see appendix D for a description of the survey) indicate that the majority of psychiatrists (55 percent) continue to work

Table 1. Changes in supply of clinically trained mental health personnel by discipline and total number of hours worked for specified years

Hours worked by discipline	1982	1983	1984	1988	1989	1992	1993	1994	1995	1996	1997	1998	1999	2000
Psychiatry[1]														
35 hours or more														
Less than 35 hours														
Total (excluding child psychiatry)	25,784	26,476				31,173	32,203			34,088	34,970	35,330		
Total (including child psychiatry)	29,018	29,853				35,249	36,482			39,197	40,352	40,731		
Psychology														
35 hours or more		39,955			48,785				57,948		56,224		59,641	
Less than 35 hours		4,625			7,745				11,869		16,794[2]		17,815[2]	
Total		44,580			56,530				69,817		73,018[2]		77,456[2]	
Social Work														
35 hours or more					65,880									
Less than 35 hours					15,857									
Total					81,737	86,378	88,889	90,303	93,245			96,407 (192,814)[3]		
Psychiatric Nursing														
35 hours or more			7,703					4,248		11,294				
Less than 35 hours			2,331					1,362		4,036				
Total			10,034[4]	3,497[5]		5,033[5]		5,610[5]	6,800[5]	15,330[6]				
Counseling[7]														
35 hours or more														24,864
Less than 35 hours														83,240
Total										61,100			96,263	108,104
Marriage and Family Therapy[8]														
35 hours or more									31,203		29,852			
Less than 35 hours									15,024		14,373			
Total									46,227		44,225			
Psychosocial Rehabilitation														
35 hours or more								29,435		84,100				
Less than 35 hours								5,565		15,900				
Total				20,909				35,000		100,000				
School Psychology[9]														
35 hours or more														
Less than 35 hours														
Total						21,012	21,693	22,214	23,782	24,804	25,870		26,482	31,278

[1] The American Medical Association (AMA) Physician Characteristics and Distribution in the United States includes physicians who are self-identified as psychiatrists and/or child psychiatrists. Psychiatric residents and inactive psychiatrists have been excluded. Numbers are revised from those reported in *Mental Health, United States 1998*.

[2] These are clinically trained psychologists. Estimates based on trained psychologists reporting hours worked.

[3] The number in parentheses is the total clinically trained social workers from a conservative estimate that the 96,407 National Association of Social Workers (NASW) members in 1998 are only 50 percent of the total social work workforce.

[4] Estimates for 1984 and 1996 were based on employed nurses with graduate degrees in psychiatric nursing, not on the population of certified nurses. In 1988 it was estimated that there were 10,567 such employed nurses; in 1984 there were 10,034.

[5] Excluding 1994, these figures represent all certified specialists in psychiatric and mental health nursing, not just those employed.

[6] A total of 17,318 were trained with 1,988 (11.5 percent) estimated to be non-employed.

[7] Data from Nation Board for Certified Counselors (NBCC) 1998 State Counseling Licensor Board Survey as well as NBCC certificant data and American Counseling Association membership data.

[8] Total represents clinically active marriage and family therapists. The total was distributed into full- and part-time based on data from a survey of marriage and family therapists in 15 States by Doherty and Simmons (1995).

[9] SOURCE: Thomas, A. (April 2000) *Report to the National Association of School Psychologists' Delegate Assembly on the State Demographic Survey.* Bethesda, MD, National Association of School Psychologists.

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Table 2. Percentage of clinically trained mental health personnel, by discipline, sex, age, and race for specified years

Socio-demographic characteristics	**Psychiatry[1] 1999**	**Psychology 1999**	**Social Work 1996**	**Psychiatric Nursing 1996**	**Counseling[2] 2000**	**Marriage and Family Therapy[3] 1998**	**Psycho-social Rehabilitation 1994**	**School Psychology[4] 2000**
Total (N)	(26,877)	77,456	92,841	(17,318)	(108,104)	(44,225)	(9,437)	31,278
Male (N)	(19,658)	40,122	21,497	(1,193)	(30,269)	(19,901)	(3,223)	(9,308)
Under 35	1.9	3.6			11.1	2.2	38.4	11.0
35–39	7.4	6.3	5.5		8.9	6.5	20.1	7.5
40–44	11.0	9.7	18.1		11.7	12.1	17.7	18.0
45–49	12.9	18.3	26.8		18.9	22.5	10.7	20.0
50–54	14.2	22.3	20.0		22.5	20.3	5.5	20.0
55–59	12.6	15.0	12.4		13.8	13.9	3.6	20.0
60–64	10.2	7.5	6.9		7.3	10.9	2.3	2.9
65–69	7.8	5.7	1.3		3.8	6.4	1.2	2.0
Over 69	18.3	11.6	0.4		2.0	5.2	0.5	0.6
American Indian/Alaska Native	0.1	0.6	0.5		0.6	0.9	0.4	0.2
Asian/Pacific Islander	8.1	1.2	1.8		0.8	0.9	2.0	0.6
Hispanic	4.5	2.1	3.2		1.8	0.9	6.4	1.6
Black (not Hispanic)	1.9	1.6	4.2		3.8	2.1	20.8	1.3
White (not Hispanic)	75.9	93.8	88.7		91.5	94.8	69.8	95.1
Not specified	9.3	0.5	1.6		1.5	6.4	0.6	1.2
Female (N)	(7,185)	37,334	(71,344)	(16,125)	77,835	(24,324)	(6,114)	(21,970)
Under 35	4.4	10.7	1.8	4.4	18.3	2.2	44.3	21.0
35–39	15.8	12.5	11.7	8.9	8.7	7.2	15.5	10.0
40–44	19.7	14.3	17.6	21.5	11.4	13.7	14.5	17.0
45–49	19.9	18.7	21.6	24.5	17.7	22.6	10.7	17.0
50–54	13.8	18.9	18.9	17.8	19.3	19.8	7.4	15.1
55–59	9.2	11.5	10.9	11.7	13.6	13.0	4.1	14.0

Table 2. Percentage of clinically trained mental health personnel, by discipline, sex, age, and race for specified years (continued)

Socio-demographic characteristics	Psychiatry[1] 1999	Psychology 1999	Social Work 1996	Psychiatric Nursing 1996	Counseling[2] 2000	Marriage and Family Therapy[3] 1998	Psycho-social Rehabi-litation 1994	School Psychology[4] 2000
60–64	5.3	5.4	5.2	5.8	6.5	8.2	2.3	2.7
65–69	3.1	3.3	1.7	5.3[5]	2.7	6.4	0.8	2.7
Over 69	8.8	4.7	0.5	NA	1.8	6.7	0.4	0.5
American Indian/Alaska Native	0.1	0.6	0.5	0.2	0.5	1.1	NA	0.3
Asian/Pacific Islander	13.3	1.6	1.7	1.9	0.8	0.4	NA	0.7
Hispanic	4.3	2.7	2.5	1.1	2.1	0.7	NA	1.8
Black (not Hispanic)	4.0	2.7	5.2	2.3	4.4	1.1	NA	2.1
White (not Hispanic)	73.8	91.7	89.0	94.6	91.1	96.1	NA	94.3
Not specified	4.2	0.6	1.1		1.2	0.7	NA	0.8

NA = Data not available

[1] 1999 American Psychiatric Association membership residing in the U.S., excluding medical students, psychiatric residents, corresponding psychiatrists, and inactive members; Not specified includes "Other." Note Age not specified for 7.1 percent of male and 10.7 percent of female.

[2] Source: Data from National Board for Certified Counselors, certificant data, and American Counseling Association membership data.

[3] Total represents clinically active marriage and family therapists. The total was distributed into full- and part-time based on data from a survey of marriage and family therapists in 15 States by Doherty and Simmons (1995).

[4] Source: Thomas, A. (April 2000) *Report to the National Association of School Psychologists' Delegate Assembly on the State Demographic Survey,* Bethesda, MD, National Association of School Psychologists.

[5] Represent psychiatric nurses who are age 65 and over.

Table 3. Estimated number of clinically active (CA) or clinically trained (CT) mental health personnel and rate per 100,000 civilian population, by discipline: United States and each region and State for specific year.
Part A. Psychiatry, Psychology, Social Work, and Psychiatric Nursing

	Psychiatry (1998)[1]		**Psychology (1999)**[2,3]		**Social Work (1998)**		**Psychiatric Nursing (1995)**[1]	
Region and State	**No. of CA persons**	**Rate**	**No. of CT persons**	**Rate**	**No. of CT persons**	**Rate**	**No. of CT persons**	**Rate**
United States	38,258	14.2	76,968	28.4	96,268	36.2	6,776	2.6
New England	3,693	27.5	7,087	52.5	9,718	72.6	1,452	10.9
Connecticut	944	28.8	1,210	36.9	2,275	69.6	343	10.5
Maine	204	16.4	394	31.4	675	54.3	75	6.0
Massachusetts	2,000	32.5	4,240	68.7	5,235	85.6	825	13.5
New Hampshire	200	16.9	450	37.5	540	46.1	70	6.0
Rhode Island	201	20.3	330	33.3	704	71.3	93	9.4
Vermont	144	24.4	463	78.0	289	49.1	46	7.8
Middle Atlantic	8,840	23.1	17,749	46.3	22,231	58.2	1,333	3.5
New Jersey	1,357	16.7	2,464	30.3	4,338	53.9	283	3.5
New York	5,501	30.3	10,120	55.6	13,690	75.5	688	3.8
Pennsylvania	1,982	16.5	5,165	43.1	4,203	35.0	362	3.0
East North Central	4,799	10.9	11,007	24.8	17,179	39.1	609	1.4
Illinois	1,488	12.4	3,000	24.7	5,032	42.3	119	1.0
Indiana	473	8.0	1,336	22.5	2,111	36.0	74	1.3
Michigan	1,127	11.5	2,021	20.5	5,264	53.9	163	1.7
Ohio	1,136	10.1	3,412	30.3	3,143	28.1	205	1.8
Wisconsin	575	11.0	1,238	23.6	1,629	31.5	48	0.9
West North Central	1,835	9.8	6,308	20.8	5,331	28.7	357	1.9
Iowa	200	7.0	470	16.4	713	25.0	36	1.3
Kansas	321	12.2	516	19.4	1,060	40.8	47	1.8
Minnesota	505	10.7	3,228	67.6	1,263	27.0	148	3.2
Missouri	545	10.0	1,536	28.1	1,620	30.0	70	1.3
Nebraska	146	8.8	292	17.5	357	21.5	32	1.9
North Dakota	70	11.0	131	20.7	164	25.6	17	2.7
South Dakota	48	6.5	135	18.4	154	20.9	7	0.9
South Atlantic	6,627	13.5	11,366	22.9	15,113	31.3	1,316	2.7
Delaware	96	12.9	273	36.2	270	36.9	22	3.0
District of Columbia	338	64.6	1,144	20.4	1,393	264.3	30	5.7
Florida	1,682	11.3	3,050	220.2	3,712	25.3	195	1.3
Georgia	813	10.6	1,434	18.4	1,523	20.3	141	1.9
Maryland	1,323	25.8	1,835	35.5	2,642	51.9	405	8.0
North Carolina	910	12.1	1,482	19.4	2,237	30.1	117	1.6

Table 3. Estimated number of clinically active (CA) or clinically trained (CT) mental health personnel and rate per 100,000 civilian population, by discipline: United States and each region and State for specific year. Part A. Psychiatry, Psychology, Social Work, and Psychiatric Nursing (continued)

	Psychiatry (1998)[1]		Psychology (1999)[2,3]		Social Work (1998)		Psychiatric Nursing (1995)[1]	
Region and State	No. of CA persons	Rate	No. of CT persons	Rate	No. of CT persons	Rate	No. of CT persons	Rate
South Carolina	432	11.3	430	11.1	781	20.8	88	2.3
Virginia	881	13.0	1,540	22.4	2,150	31.9	285	4.2
West Virginia	152	8.4	178	9.9	405	22.3	33	1.8
East South Central	1,351	8.2	2,501	15.1	3,567	21.8	214	1.3
Alabama	291	6.7	532	12.2	800	18.5	55	1.3
Kentucky	383	9.7	554	14.0	1,012	25.9	67	1.7
Mississippi	164	6.0	271	4.9	521	19.1	20	0.7
Tennessee	513	9.4	1,144	20.9	1,234	23.0	72	1.3
West South Central	2,723	9.1	3,938	13.0	6,623	22.4	262	0.9
Arkansas	187	7.4	321	12.6	299	11.9	13	0.5
Louisiana	504	11.5	473	10.8	1,620	37.2	38	0.9
Oklahoma	253	7.6	499	14.9	771	23.2	25	0.8
Texas	1,779	9.0	2,645	13.2	3,933	20.2	186	1.0
Mountain	1,832	10.9	4,307	25.1	5,072	35.1	365	2.5
Arizona	492	10.5	1,035	21.7	1,311	52.0	85	3.4
Colorado	616	15.5	1,620	39.9	1,379	35.4	141	3.6
Idaho	76	6.2	159	12.7	328	27.1	9	0.7
Montana	74	8.4	179	20.3	241	27.4	17	1.9
Nevada	117	6.7	255	14.1	395	23.6	13	0.8
New Mexico	238	13.7	438	25.2	540	31.2	62	3.6
Utah	180	8.6	479	24.5	733	35.6	29	1.4
Wyoming	39	8.1	142	29.6	145	30.2	9	1.9
Pacific	6,558	5.1	12,705	28.9	11,434	26.6	868	2.0
Alaska	62	10.1	138	22.3	800	131.4	33	5.4
California	5,169	15.8	9,790	29.5	7,279	22.6	376	1.2
Hawaii	213	17.9	376	31.7	675	56.9	27	2.3
Oregon	408	12.4	1,001	30.2	1,109	34.2	87	2.7
Washington	706	12.4	1,400	24.3	1,571	28.0	345	6.1

Note: For psychology, social work, and psychiatric nursing, the count is for clinically trained, because count is more accurate.

[1] For psychiatry, the numerator of the rate is based on clinically active psychiatrists employed in the private sector and does not include residents or fellows (see AMA Physicians Characteristics 2000) and the denominator is based upon the 1998 resident population of the United States (see www.census.gov/population/estimates).

[2] Source: 1999 APA Directory Survey. Compiled by APA Research Office. Denominator is residential populations as of July 1, 1999 (see www.census.gov/population/estimates).

[3] Twenty-four individuals live in foreign countries. Source: American Nurses Credentialing Center, 1996, p. 4; this is based on certified nurses only.

Table 3. Estimated number of clinically active (CA) or clinically trained (CT) mental health personnel and rate per 100,000 civilian population, by discipline: United States and each region and State for specific year. Part B. Counseling, Marriage and Family Therapy, Psychosocial Rehabilitation and School Psychology

Region and State	Counseling (2000)[1]		Marriage and Family Therapy (1998)[2]		Psychosocial Rehabilitation (1996)		School Psychology (2000)[3]	
	No. of CT persons	Rate	No. of CA persons	Rate	No. of CA persons	Rate	No. of CA persons	Rate
United States	108,104	47.8	44,225	16.7	100,000	37.7	31,278	11.4
New England	7,282	48.5	1,839	13.7	12,200	91.2	2,448	18.0
Connecticut	1,241	37.8	544	16.6	3,000	91.7	789	24.0
Maine	1,295	103.4	110	8.9	1,000	80.5	249	19.8
Massachusetts	4,080	66.1	998	16.3	4,600	75.2	905	14.6
New Hampshire	258	21.4	83	7.1	1,900	162.1	252	20.6
Rhode Island	94	9.5	72	7.3	700	70.9	160	16.3
Vermont	314	52.9	32	5.4	1,000	169.8	93	15.1
Middle Atlantic	28,383	68.5	2,413	6.3	22,400	58.6	5,887	15.3
New Jersey	3,078	37.8	947	11.8	4,100	50.9	1,187	14.5
New York	15,252	83.8	727	4.0	7,700	42.5	3,450	19.0
Pennsylvania	10,053	83.8	739	6.1	10,600	8.2	1,250	10.2
East North Central	20,159	43.5	3,708	8.4	10,700	24.4	5,398	12.2
Illinois	1,492	12.3	533	4.5	3,100	26.1	1,821	15.1
Indiana	731	12.3	1,269	21.6	600	10.2	452	7.5
Michigan	5,948	60.3	1,105	11.3	3,000	30.7	850	8.9
Ohio	9,435	83.8	262	2.3	3,400	30.4	1,375	12.1
Wisconsin	2,553	48.6	539	10.4	600	11.6	900	16.9
West North Central	5,396	43.0	1,747	9.4	10,000	53.8	2,343	15.8
Iowa	361	12.6	148	5.2	1,700	59.6	450	33.4
Kansas	294	11.1	286	11.0	1,100	42.4	550	20.6
Minnesota	600	12.6	672	14.3	2,000	42.7	673	13.9
Missouri	1,474	27.0	383	7.1	3,400	62.9	240	8.5
Nebraska	1,754	105.3	83	5.0	500	30.2	280	16.4
North Dakota	374	59.0	21	3.3	500	78.0	58	8.8
South Dakota	538	73.4	154	20.9	800	108.4	92	11.8
South Atlantic	14,868	38.1	3,243	6.7	18,800	39.0	4,819	9.6
Delaware	61	8.1	23	3.1	200	27.3	102	13.3
District of Columbia	500	96.2	39	7.4	700	132.3	62	11.9
Florida	4,316	28.6	1,320	9.0	5,700	38.9	1,500	9.8
Georgia	1,703	21.9	525	7.0	1,000	13.4	660	8.4
Maryland	1,554	30.0	186	3.7	6,900	135.5	601	11.4
North Carolina	1,814	12.6	569	7.7	1,200	16.2	757	9.7

Table 3. Estimated number of clinically active (CA) or clinically trained (CT) mental health personnel and rate per 100,000 civilian population, by discipline: United States and each region and State for specific year.
Part B. Counseling, Marriage and Family Therapy, Psychosocial Rehabilitation and School Psychology (continued)

Region and State	Counseling (2000)[1]		Marriage and Family Therapy (1998)[2]		Psychosocial Rehabilitation (1996)		School Psychology (2000)[3]	
	No. of CT persons	Rate	No. of CA persons	Rate	No. of CA persons	Rate	No. of CA persons	Rate
South Carolina	1,665	42.8	240	6.4	500	13.3	475	12.3
Virginia	1,906	27.7	321	4.8	2,500	37.1	532	7.6
West Virginia	1,351	74.8	20	1.1	100	5.5	130	7.1
East South Central	3,429	20.8	874	5.4	2,400	14.7	1,001	5.9
Alabama	1,332	30.5	149	3.4	600	13.9	173	3.9
Kentucky	641	16.2	353	9.0	1,000	25.6	330	8.3
Mississippi	567	20.5	125	4.6	200	7.3	73	2.6
Tennessee	888	16.2	247	4.6	600	11.2	425	7.5
West South Central	12,662	37.2	4,443	15.0	5,900	19.9	2,363	7.7
Arkansas	640	25.1	82	3.3	800	31.7	135	5.1
Louisiana	1,443	33.0	120	2.8	1,200	27.6	354	8.0
Oklahoma	1,532	45.6	607	18.3	300	9.0	225	6.8
Texas	9,047	45.1	3,634	18.7	3,600	18.5	1,649	8.2
Mountain	10,889	82.6	2,020	14.0	3,800	26.3	2,146	12.1
Arizona	1,770	37.1	357	14.1	1,700	67.4	593	12.4
Colorado	2,047	50.5	388	10.0	300	7.7	560	13.4
Idaho	856	68.4	40	3.3	0	0.0	143	10.6
Montana	1,916	217.0	32	3.6	200	22.8	195	20.5
Nevada	1,118	61.8	539	32.1	200	11.9	180	9.6
New Mexico	2,775	159.5	227	13.1	900	52.0	195	10.5
Utah	111	5.2	390	18.9	200	9.7	178	8.1
Wyoming	296	61.8	47	9.8	300	62.5	102	19.4
Pacific	5,036	30.5	23,938	55.8	13,800	32.2	4,873	11.5
Alaska	383	61.8	208	34.2	0	0.0	150	22.9
California	727	2.2	21,585	66.9	11,300	35.0	3,658	11.2
Hawaii	85	7.2	76	6.4	500	42.1	70	5.6
Oregon	1,138	34.3	1,305	40.2	1,000	30.8	245	7.2
Washington	2,703	47.0	764	13.6	1,000	17.8	750	12.8

[1] Numerator for rates is from National Board for Certified Counselors (NBCC) 1998 State Counseling Licensure Board Survey as well as NBCC certificant data and American Counseling Association membership data, and denominator for rates is from the U.S. Bureau of Census, 1999.

[2] Total represents clinically active marriage and family therapists.

[3] Numerators for rates are from Thomas, A. (April 2000) *Report to the National Association of School Psychologists' Delegate Assembly on the State Demographic Survey,* Bethesda, MD, National Association of School Psychologists, and denominator is based on the residential population of the United States projected to July 1, 2000 (Campbell, 1996).

Table 4. Percentage of clinically trained mental health personnel, by number of years since completion of highest professional degree, for specified years

		Number of years since completion						
Discipline	(N)	0–2	3–5	6–10	11–15	16–20	21+	Not specific
Psychiatry (1999)[1]	(26,877)	0.0	0.5	9.4	13.5	12.8	63.1	0.6
Psychology (1997)[2]	(77,456)	6.2	11.0	16.3	15.5	15.7	35.3	—
Social Work (1997)	(96,407)	13.9	16.4	18.4	18.5	13.9	18.5	—
Psychiatric Nursing (1996)[3]	(17,318)	17.9	15.4	14.5	20.0	13.1	18.1	1.0
Counseling (2000)[4]	(108,104)	8.4	12.5	20.6	20.6	13.6	24.4	—
Marriage and Family Therapy (1998)[5]	(44,225)	2.3	9.1	27.4	27.9	20.6	13.0	—
Psychosocial Rehabilitation (1994)	(9,437)	2.3	3.2	16.3	18.9	18.7	40.6	—
School Psychology (2000)[6]	(31,278)	6.4	10.7	15.8	12.1	17.1	37.9	—

— = Data not available

[1] 1999 American Psychiatric Association membership, excluding medical students, psychiatric residents, corresponding psychiatrists, and inactive members.

[2] Estimate based on clinically trained personnel reporting years completed. Missing are excluded.

[3] All subjects have masters or doctoral education in nursing. This data in this table reflect the years since completion of highest nursing degree. They do not include years since doctoral degrees in non-nursing areas. In several cases, it was not clear if a nurse received the highest degree during the period of the survey; therefore, the 0–2 year estimate may be high. It should be noted that the highest degree might be a doctorate rather than master's degree.

[4] Based on NBCC National Study of Professional Counselors (2000).

[5] Total represents clinically active marriage and family therapists. The total was distributed into full- and part-time based on data from a survey of marriage and family therapists in 15 States by Doherty and Simmons (1995).

[6] Source: Thomas, A. (April 2000) *Report to the National Association of School Psychologists' Delegate Assembly on the State Demographic Survey*, Bethesda, MD, National Association of School Psychologists.

in more than one setting during the course of a week, although it appears that fewer are doing so than in 1988 (76 percent) (1988 APA PAS). Among psychiatrists working full time in the United States in 1998, 60.0 percent worked in two or more settings (Table 5), while the proportion of psychiatrists working part time in two or more settings was 35 percent. By contrast, in 1988, 79 percent of psychiatrists working full time and 59 percent working part time did so in two or more settings. However, the mean number of settings a psychiatrist works in per week remained basically unchanged between 1988 and 1998 (2.3 and 1.9, respectively). Overall, the average number of hours psychiatrists work per week remained unchanged at 48, while the proportion of psychiatrists working full time has increased from 74 percent to 78 percent in the past 10 years.

Individual or group private practice historically has been the primary work setting for the greatest number of psychiatrists, but substantial changes in the health care delivery system may have resulted in a decline in the proportion of psychiatrists primarily working in these settings. Between 1982 and 1988 the proportion of psychiatrists reporting private practice as their primary work activity decreased from 57.7 percent to 45.1 percent (Dorwart et al., 1992). By 1998, this figure was up to 37 percent (Table 6). However, in 1998, psychiatrists reported spending less than half of their patient care time in either an individual or group practice (1998 APA NSPP).

The shift away from individual/group private practice may be due, in part, to the diverse employment opportunities for psychiatrists created by the evolution of private psychiatric hospitals, general hospital psychiatric units, and organizations providing outpatient mental health care (Olfson, Pincus, and Dial, 1994). While 21 percent of active psy-

Table 5. Percentage of clinically trained mental health personnel, by discipline, employment status, and number of employment settings for specified years

	Discipline and Year							
Employment setting	**Psychiatry[1] 1998**	**Psychology[2] 1999**	**Social Work 1998**	**Psychiatric Nursing 1996**	**Counseling[3] 2000**	**Marriage/ Family Therapy[4] 1998**	**Psychosocial Rehab. 1994**	**School Psychology[5] 2000**
Full-time (N)	(776)	(46,047)	N/A	(11,294)	(24,864)	(37,454)		(26,611)
One setting	40.0	50.2		65.2	80.0	60.4	77.5	94.0
Two or more settings	60.0	49.8		34.8	20.0	39.6	22.5	N/A
Part-time (N)	(170)	(13,216)	N/A	(4,036)	(83,240)	(14,373)		(4,667)
One setting	65.3	64.5		62.9	65.0	66.2	54.8	38.1
Two or more settings	34.7	35.5		37.1	35.0	33.8	45.2	61.9

N/A = Data not available

[1] Respondents to the 1998 American Psychiatric Association National Survey of Psychiatric Practice currently active in psychiatry (Sample N=976). Full-time is defined as 35 hours or more per week.

[2] Represents clinically active psychologists. Just over half (53.4) of all active practitioners (both full- and part-time) are working one position only (i.e., they do not have multiple positions/settings).

[3] Based on NBCC National Study of the Professional Counselors (2000). Full-time is defined as 35 or more hours per week.

[4] The total of 44,225 marriage and family therapists was distributed into employment settings based on data from a survey of marriage and family therapists in 15 States by Doherty and Simmons (1995).

[5] Source: Thomas A. (April 2000) *Report to the National Association of School Psychologists' Delegate Assembly on the State Demographic Survey,* Bethesda, MD, National Association of School Psychologists.

chiatrists responding to the 1998 APA NSPP reported working in a hospital as their primary work setting (10 percent general, 5.9 percent public psychiatric, and 4.1 percent private psychiatric), this proportion is down from 1988 (28 percent). On the other hand, for 21 percent of psychiatrists in 1998, outpatient clinics are their primary work setting (Table 6), compared with 10 percent in 1988. Furthermore, in 1998 psychiatrists reported that nearly one-quarter (22 percent) of psychiatric patient care time was spent in either a general or psychiatric hospital, and 21 percent of psychiatric patient care time was spend in outpatient facilities (including private, public, and HMO clinics).

In addition to working in more than one setting, psychiatrists are usually involved in more than one work activity (Table 7). In 1998, 96 percent of psychiatrists were involved in patient care, 90 percent in administration, and 20 percent in research. Psychiatrists spent a mean number of 28 hours per week in direct patient care in 1998, 4.9 fewer hours per week (a 15 percent reduction) than in 1988. In addition, in 1998, psychiatrists appear to be spending more time in administrative activities (11 hours/week) than in 1988 (5.8 hours/week). However, since the 1988 PAS did not distinguish between administrative activities related to patient care and those that were not, as was done with the 1998 NSPP, and since in 1998 most of the administrative activities hours were directly related to patient care (e.g., maintaining medical records), it is possible that the differences observed are an artifact of differences in survey instrumentation. It is also possible that the decrease in direct patient care hours and increase in administrative hours during this period are due to changes in the organization and financing of the Nation's health care system.

Conclusion

Over the past two decades, the number of clinically trained psychiatrists has increased; however, the rate of growth in the number of clinically trained psychiatrists has decreased. There has been an increase in the number of female psychiatrists entering the field, and the median age of psychiatrists has increased slightly. The number of psychiatric residents has remained relatively constant since 1990. There has, however, been significant growth in the number of international medical graduates entering psychiatric residencies, although this trend might be reversing.

The average psychiatrist works in more than one setting. In the past 20 years, individual/group

Table 6. Percentage of clinically trained mental health personnel, by discipline and primary and secondary employment setting for specified years

	Discipline and Year							
Employment setting	**Psychiatry[1] 1998**	**Psychology[2] 1999**	**Social Work 1998**	**Psychiatric Nursing 1996**	**Counseling[3] 1998**	**Marriage/ Family Therapy[4] 1998**	**Psychosocial Rehab. 1994**	**School Psychology 2000**
Primary employment setting (N)	(931)	(59,263)	(58,896)	(15,330)	(108,104)	(44,137)	N/A	(31,278)
Hospital	21.0	11.0	11.3		3.7	3.2		0.0
Mental health setting	10.0	4.0	5.3	15.6	3.3			
Other health setting	10.7	7.0	6.0	27.6	0.4			
Clinic	20.9	8.0	22.3		22.5	19.4		2.1
Mental health setting	N/A		16.4	7.8	18.7			2.1
Other health setting	N/A		5.9	3.2	3.8			0.0
Academic setting	1.0	21.0	17.1		33.4			87.2
University/college	N/A	17.0	8.8	18.7	13.6			5.2
Elementary/ secondary schools	N/A	4.0	8.3	5.3	19.8			82.6
Individual practice	37.0	38.0	18.1	5.1	15.1			3.9
Group practice	13.1	10.0	5.1	4.6	5.0	65.2		
Nursing home	1.3	0.5	2.6	0.8	0.4			
Social service agency	N/A		20.1		3.9			0.0
Other/not specified	5.9	11.0	3.4	11.2	16.0	12.2		3.2
Secondary employment setting (N)	(508)	(27,616)	(14,892)	N/A	(25,405)	(13,444)	N/A	N/A
Hospital	36.9	7.0	2.9		6.3			
Mental health setting	15.1	2.0	1.1		5.0	11.9		
Other health setting	21.8	5.0	1.8		1.3			
Clinic	20.3	6.0	20.2		16.9	33.1		
Mental health setting	N/A		13.5		11.3			
Other health setting	N/A		6.7		5.6			
Academic setting	1.3	23.0	13.7		25.0			
University/college	N/A	20.0	11.8		12.5			
Elementary/ secondary schools	N/A	3.0	1.9		12.5			
Individual practice	18.0	34.0	34.9		21.6	33.1		
Group practice	6.4	9.0	7.7		10.0			
Nursing home	6.3	2.0	2.4		0.6			
Social service agency	N/A		4.7		3.8			
Other/not specified	10.8	19.0	3.4		15.6	21.9		

Note: Percentages may not equal 100% due to rounding.

N/A = Data not available

[1] American Psychiatric Association Annual Census of Residents: 1998. Counts are based on estimated 98 percent response rate from the training programs.

[2] Total represents clinically active psychologists.

[3] Based on the NBCC National Study of the Professional Counselor (2000).

[4] Total represents clinically active marriage and family therapists. A total of 44,225 marriage and family therapists were distributed into full- and part-time based on data from a survey of marriage and family therapists in 15 States by Doherty and Simmons (1995).

Table 7. Percentage of clinically trained mental health personnel involved in each type of work activity, by discipline, for specified years[1]

	Discipline and Year							
Type of work	**Psychiatry[2] 1998**	**Psychology[3] 1999**	**Social Work[4] 1998**	**Psychiatric Nursing 1996**	**Counseling[5] 2000**	**Marriage/ Family Therapy[6] 1998**	**Psycho-social Rehab. 1994**	**School Psychology[7] 1998**
(N)	(976)	(30,255)	(96,407)	(15,330)	(108,104)	(44,225)	NA	NA
Patient care/ direct service	95.7	90.2	69.1	83.6[8]	73.4	88.4	96.1	82.5
Research	19.7	26.0	1.7	27.4	0.4	16.5	NA	2.0
Teaching	NA	40.2	9.2	42.9	10.8	46.7	NA	5.2
Administration	90.0	39.0	30.9	58.5	7.9	56.0	10.1	4.3
Other activities	87.3	42.9	2.9	62.6[9]	7.5	34.1	NA	6.0

NA = Data not available

[1] Percentage will not sum to 100 because clinically trained or clinically active mental health personnel can be involved in more than one type of work activity. Only psychiatry reported clinically active persons.

[2] American Psychiatric Association Annual Census of Residents: 1998. Counts are based upon an estimated 98 percent response rate from the training programs.

[3] Source: 1999 APA Directory Survey compiled by APA Research Office. Missing information has been excluded.

[4] Current survey data allow only one choice; thus, data are not comparable to other disciplines.

[5] Based on the NBCC National Study of the Professional Counselor (2000).

[6] The total represents active marriage and family therapists. The total was distributed into type of work activity based on data from a survey of marriage and family therapists in 15 States by Doherty and Simmons (1995).

[7] Data are from Thomas, A. (2000) *Report to the National Association of School Psychologists' Delegate Assembly on State Demographic Survey* and replace earlier data. Going from Patient Care/Direct Service to Other Activities, the old data are 69.0, 2.0, 7.0, 3.0, and 19.0.

[8] Includes staff supervision.

[9] Mainly consultation as other activity.

private practice and hospitals have declined as psychiatrists' primary work settings. Nonetheless, there has been an increase in the number of psychiatrists working in organized care settings. Psychiatrists continue to be involved in many types of work activities, including direct patient care, research, administration, and teaching (Zarin, Pincus, Peterson, et al., 1998).

Research has demonstrated that psychiatrists treat a more severe and complex patient population than other mental health providers (Olfson and Pincus, 1996; Pincus, Zarin, Tanielian, et al., 1999). Analyses of the National Medical Expenditure Survey data indicate that compared with psychologists, psychiatrists tend to see a larger proportion of persons who are socially disadvantaged, report that their health interferes with their work, and who have higher utilization of nonhospital outpatient mental health care. In addition, psychiatrists provided significantly more visits than psychologists for schizophrenia, bipolar disorder, substance abuse, and depression, but fewer visits for anxiety disorders and isolated symptoms. Data on specific psychiatric patient populations also highlight key differences between the patients treated by psychiatrists and those treated by other mental health providers (Zarin, Suarez, Pincus, Kupersanin, and Zito, 1998).

As the U.S. health delivery system continues to evolve, it will be increasingly important to track and understand the characteristics of psychiatrists as well as the populations they serve.

Psychology

In the first half of the 20th century, psychologists were primarily employed in traditional academic settings, while only a small proportion of individuals worked outside the university, actively engaged in mental health services. This picture be-

Table 8. Number of trainees by discipline for selected academic years, United States, 1984–2000

	Academic Year							
Number of trainees	1984–85	1989–90	1994–95	1995–96	1996–97	1997–98	1998–99	1999–00
Psychiatry[1]								
Total	5,312	6,072	6,089		6,076		6,076	
Full time	NA	6,011	6,034		6,015		5,914	
Part time	NA	61	55		61		135	
First year full time	843	1,178	1,277		1,214		1,033	
Residencies completed	1,295	1,371	1,442		1,296		NA	
Psychology[2,3,4]								
Total	14,586	16,853	28,782			23,088		
Full time	11,260	13,372	24,916			21,056		
Part time	3,326	3,481	3,866			2,032		
First year full time	NA	2,335	7,365			4,466		
Doctorates awarded	1,968	2,358	2,671			3,771		
Social Work								
Juniors and seniors in B.A. program full time	14,581	17,688	24,536		27,015			
Master's degree students								
Total	21,999	27,430	33,212		35,338			
Full time	14,055	17,475	21,622		22,718			
Part time	7,944	9,955	11,590		12,620			
Doctoral students								
Total	1,430	1,794	2,097		2,087			
Full time	702	838	1,102		1,134			
Part time	728	956	995		953			
Degrees awarded								
BSW	6,347	7,250	10,511		12,356			
MSW	8,798	10,063	12,856		14,484			
DSW	181	247	294		258			

Table 8. Number of trainees by discipline for selected academic years, United States, 1984–2000 (continued)

Number of trainees	Academic Year							
	1984–85	1989–90	1994–95	1995–96	1996–97	1997–98	1998–99	1999–00
Psychiatric Nursing								
Total	1,934[5,6]	1,853	1,674		1,401	1,274		
Full time	677		439		364	458		
Part time	1,257		1,235		1,037	816		
Degrees awarded/ training completed	771	643	568[8]		443[9]	426		
Counseling[10]								
Total			29,906					20,637
Master degree students			28,270					19,576
Doctoral students			1,636					1,061
Marriage and Family Therapy[11]								
Total			6,776			9,277		
Students in COAMFTE accredited programs[10]								
Master's degree students			971			7,696		
Doctoral degree students			159			741		
Postgraduate students			147			840		
Students in other accredited programs								
Predegree students			3,369					
Postdegree supervision students			2,130					
Supervision students			NA					

Table 8. Number of trainees by discipline for selected academic years, United States, 1984–2000 (continued)

Number of trainees	Academic Year							
	1984–85	1989–90	1994–95	1995–96	1996–97	1997–98	1998–99	1999–00
				School Psychology				
Total			4,404			8,123		
New practitioners in field (minimum specialist degree)			1,800			1,897		

NA = Data not available

[1] Data based on American Psychiatric Associate's Annual Census of Residents: For 1998–99 the APA only reported percentage. These were converted to numbers.

[2] Numbers for students are derived from 1998 Graduate Study in Psychology.

[3] Counts represent accredited programs only and responses to surveys and therefore are an undercount of the actual students in doctoral programs in psychology in the health service provider subfields. First year full-time is counted as new enrollments in 1998.

[4] Doctorates awarded include Ph.D.s reported by National Research Council as well as 800 PsyDs degrees estimated by APA's Research Office. PsyDs are undercounted in this instance. The data are for 1997–98.

[5] 1984–85 enrollment figure is an estimate. The number of full-time students was 677; based on 35 percent of all master's students being full time. This number was estimated to reflect an expected 1,257 part-time students.

[6] 1984 and 1989 data contain students enrolled in both advanced clinical practice and teaching. The sum of enrollments in advanced clinical practice and teaching make up the universe of master's students in Psychiatric Nursing. According to P. Rosenfeld, Director of Research at the National League of Nursing, rarely will a psychiatric nursing student be classified within any of the other available classifications for graduate students.

[7] For the period 10/16/97–10/15/98, unofficial and unpublished data are from the National League of Nursing (NLN).

[8] Reflects 1995–94 academic year.

[9] Reflects 1995–96 graduations through fall 1996.

[10] Based on Hollis, J.W. (2000) Counselor Preparations: 1999–2001: Programs, Faculty, Trends. Declines from 1994–1995 may be due in part to a more strict definition of counselor preparation programs in this edition.

[11] 1994–95 data were estimated based on several sources, including: Students enrolled in programs accredited by AAMFT Commission of Accreditation for Marriage and Family Therapy student members who are not in COAMFTE accredited programs, but are in programs of regionally accredited institutions, and American Association for Marriage and Family Therapy associate members. The associate membership category is for those who have completed their educational requirements, but have yet to complete the clinical supervision requirements of their training. Source of 1997–98 data: Data for 1997–98 are more reliable than those previously reported for 1994–95. They are based on a survey of 216 MFT Training Programs by American Association for Marriage and Family Therapy, March 1998.

gan to change in the mid-1970's, with statutory recognition of the profession by State regulatory agencies (DeLeon, Vanden Bos, and Kraut, 1984). In 1975, there were an estimated 20,000 licensed psychologists in the United States. This number doubled to 46,000 by 1986, and by 1999 there were at least 77,000 licensed psychologists (see Table 1).

Coupled with the dramatic growth in the number of practitioners was a significant increase in psychologists' roles as direct mental health service providers. Today psychologists are involved in every type of mental health setting, from veterans' hospitals to community clinics, whether research or treatment oriented, or general primary health care or specialty focused (e.g., sports and other injuries, elderly, seriously mentally ill). As the environments have expanded, the roles of psychologists also have had to change. Roles have diversified and become more complex, and they include more than the assessment and treatment of individual clients. They now include prevention, intervention at the community level, assessment of service delivery systems (outcomes), and client advocacy.

Demographic and Training Characteristics

The past two decades have been ones of growth for doctoral-level psychologists trained in specialties that focused on the provision of mental health services. Stapp, Tucker, and Vanden Bos (1985) estimated the number of doctoral-level psychologists at 44,600. Fourteen years later, that number had climbed to at least 77,000. This growth was fueled early on by a surge in degree production. The number of new doctorates awarded in the practice specialties in psychology rose from 1,571 in 1979 to just under 2,400 in 1989 and about 3,200 in 1999 (Henderson, 1996; Sanderson and Dugoni, 1999; Sanderson, Dugoni, Hoffer, and Selfa, 1999). The training system has also expanded during the past two decades, with a doubling in the number of doctoral psychology programs in clinical, counseling, and school psychology accredited by the American Psychological Association. There were 134 such doctoral programs in 1979, 234 in 1989, and 329 in 2,000. These counts do not include the programs that do not seek accreditation by the APA but that do award doctoral-level degrees in psychology, which further expand the ranks of the clinically trained. The total number of graduate students enrolled in these doctoral programs (accredited) has risen from 14,586 in 1984–85 to at least 18,773 in 1996 (Williams, 1996). Although there appears to be a slight downturn in enrollments in doctoral programs in psychology, this is not the case for clinical psychology (Sanderson et al., 1999).

Despite this growth in the number of psychologists trained to provide direct services, these services continue to be relatively inaccessible in many areas of the country, and shortages of mental health personnel appear for certain target populations. These populations include seriously emotionally disturbed children and adolescents, adults with serious mental disorders, rural residents with mental health needs, and the elderly, to name a few.

Tables 1 to 8 present basic information on the demographic characteristics of psychologists who could provide mental health services (the clinically trained pool). In many ways this group reflects the changing demographic characteristics of psychologists as a whole. For example, women comprised 48 percent of all clinically trained psychologists in 1999 (Table 2)—up from 38 percent in 1989 (Dial et al., 1990). This growth is not surprising, given that the participation of women in psychology as a whole has grown significantly over the past two decades (Pion et al., 1996). In 1998, almost 67 percent of all Ph.D.s in psychology were awarded to women, compared with 49 percent in 1985 and 32 percent as recently as 1975 (Sanderson et al., 1999). In 1997, women accounted for 69 percent of all full-time graduate students in doctorate granting institutions (National Science Foundation, 1999).

Although psychology attracts a greater percentage of racial and ethnic minorities than many other disciplines, their representation in the health service provider workforce is relatively small at 7 percent. This figure is lower than their representation in the U.S. adult population (over 28 percent in 1999) (U.S. Bureau of the Census, 1999). As reported by the National Science Foundation, the proportion of psychology Ph.D.s in science and engineering fields earned by racial and ethnic minorities was just under 16 percent in 1998 (National Science Foundation, 1999). The percentages of ethnic minorities in the clinically trained health service provider workforce are based on percentages derived from the APA membership. It appears likely that these percentages are somewhat less than what would be predicted given the Census and NSF figures, and as such should be interpreted carefully. As Table 2 indicates, the population of clinically trained women was slightly more racially and ethnically diverse than that of men.

The pool of clinically trained psychologists continues to age. The median age in 1999 was 50.0 years, compared with 44.2 in 1989. Similarly, the median years since the doctorate increased from 12 years in 1989 to 16 years in 1999. Results reveal that women were somewhat younger than men and had earned their doctorates more recently. The median age for women was 48 years, compared with 52 for men; the median number of years since the doctorate was 12 years for women and 20 for men. These findings are to be expected, given the trends in degree production noted earlier.

Professional Activities

Table 5 indicates that for those who specified, most of the psychologists who are actively providing services were working full time (78 percent), and according to Table 6, 47 percent (27,616 out of 59,263) were doing so by a combination of two or more positions. For those who were working part time, it was more common to be occupying one position.

The primary and secondary employment settings of active health service providers in psychology are presented in Table 6. The numbers and percentages may not precisely equal totals or 100 percent due to rounding. Just under half indicated that their primary setting was independent practice, with most having a solo practice (38 percent), rather than working in a group or medical/psychological group setting (10 percent). The next most frequent setting, a far second, was university or college setting (17 percent). Other settings included clinics (8 percent), nonpsychiatric hospitals (7 percent), mental health hospitals (4 percent), and elementary and secondary schools (4 percent). About

11 percent were employed in other settings such as government or business.

Based on Table 6, just under 47 percent, or about 27,616 of all clinically active psychologists, worked in more than one setting in 1999. Again, the most frequent was solo independent practice at 34 percent, followed by academic (20 percent), and other settings (19 percent). Much smaller percentages responded with other settings.

Table 7 reveals that just under 88 percent of those who are trained to provide direct services did in fact report this as an activity in which they were involved. About one-fourth reported conducting research, and 40 percent were teaching (usually in higher education). Over one-third reported involvement in administration, and just over one-fifth reported employment activities not captured by these categories (such as publishing or writing). Additional activities not presented in this chapter but captured in other survey efforts reveal involvement in educational services in elementary and secondary school settings, and in other applied psychology activities (APA, 1999).

Discussion

The information in this chapter is important in examining the current status of human resources and care delivery in mental health, particularly within the context of managed care. Unfortunately, many critical issues are not addressed by these data. Given the increasing demand for cost-effective service, it is critical that evaluations focus on determining the cost-effectiveness of specific treatment and intervention outcomes. This necessary shift of attention away from the process of delivery to outcome will demand analyses of economic and clinical substitutability of mental health professionals. Presently available data do not permit examination of these questions in an effective manner.

Other questions cannot be answered about how mental health professionals provide services. Additional information is needed on characteristics of the providers, clientele treated, actual services delivered, sources of referrals, and relationships with other health and social service professionals. This information deficit plagues all mental health professions. Given the severe consequences of psychiatric disability, it is essential that relevant policy makers work together to improve the quality of information currently available on human resources in mental health.

In conclusion, it should again be noted that the minimal core data elements required to identify the important characteristics of mental health and substance abuse providers have been developed (MH, US, 1998). Such information is expected to contribute significantly to improving information about service providers in the health care system.

Social Work

The social work profession started in the mid-19th century in response to grievous injustices to poverty, homelessness, children laboring in sweatshops, the plight of widows and orphans, mistreatment of prisoners, and neglect of people with mental illness. In 1998, the social work profession celebrated 100 years since the offering of the first classes in social work at Columbia University in New York City.

The turn of the 20th century saw the emergence of social work as a profession. Massachusetts General Hospital in Boston pioneered the development of hospital and psychiatric social work, starting a social services department in 1905 and hiring social workers to work with patients with mental illness in 1907. School social work programs were started in New York and other cities in 1907. Social work's advocacy for children was reflected in creation of the U.S. Children's Bureau in 1912. The U.S. Veterans Bureau (now Department of Veterans Affairs) began hiring social workers to work in its hospitals in 1926.

Social workers helped President Franklin D. Roosevelt implement the New Deal to fight the poverty of the Great Depression. Social work jobs doubled in the 1930's, from 40,000 to 80,000, as public-sector income maintenance, health, and welfare programs were created in response to the Depression. Social worker Harry Hopkins headed two major relief programs, the Federal Emergency Relief Administration and the Works Progress Administration. Social worker Frances Perkins was appointed Secretary of Labor by President Roosevelt in 1933. The first woman to head a Cabinet agency, Perkins advocated for improvements in working conditions, including a minimum wage, maximum hours, child labor legislation, and unemployment compensation. Social worker Jane Addams, widely known for her settlement house work and antiwar activism, was a co-winner of the Nobel Peace Prize in 1931.

The National Association of Social Workers (NASW) was formed in 1955 through the merger of seven social work organizations and is the largest association of social work professionals in the world. NASW is a membership organization that promotes, develops, and protects the practice of social work and social workers. NASW also seeks to enhance the effective functioning and well-being of individuals, families, and communities through its work and through its advocacy.

During the Great Society programs in the mid-1960's, Federal funding was used to train thousands of social workers in response to a social work staff shortage. Social worker Wilbur Cohen helped draft the original Social Security Act of 1935 and successfully worked to broaden coverage and benefits. Three decades later, Cohen was instrumental in the creation of Medicare and Medicaid. He served under President Lyndon Johnson as Secretary of Health, Education, and Welfare, which administered most Great Society programs.

Social workers are everywhere—in private practice, family counseling centers, nursing homes, child welfare agencies, neighborhood centers, schools, prisons, corporations, public office, hospitals, and public and private agencies. By 1990, all 50 States and jurisdictions had enacted legal regulation of social work. More than 200 social workers hold elective office, including one U.S. Senator and four Representatives. Social workers deal with society's most intractable problems, working with troubled children and families, organizing communities for change, doing cutting-edge research, and administering social programs.

Demographic and Training Characteristics

Because this analysis includes only NASW members, it significantly understates the true number of clinically trained social workers. Conservatively assuming that 50 percent of social workers belong to NASW, the numbers in the accompanying tables can be at least doubled to estimate the total more accurately. Data for this report are drawn from 96,407 NASW members with master's or doctoral degrees, excluding students and retired social workers. The total number of clinically trained social workers in the United States is estimated to be at least double that number, or 192,814 (Table 1).

The source for Tables 1 through 8 is membership applications and renewals that routinely solicit demographic and practice data. This report was also informed by a recent random survey of 8,992 NASW members, with an overall response rate of 52.5 percent. The survey items were the same as those collected by membership applications and renewals. The results generally supported the validity of using the renewal/application data as representative of the membership at large.

The profession of social work is overwhelmingly female (80 percent) and white (92 percent). The proportion of female social workers has been growing steadily since 1990, when female social workers represented 72 percent of the total. This trend is consistent with 1995–96 enrollment data from the schools of social work (Lennon, 1997) indicating that 83 percent of master's students were female. There has been a decline of nonwhite social workers from 11 percent in 1996 to 8 percent in 1998. Data from the schools of social work reported that 23.7 percent of full-time master's students were nonwhite. This may suggest that persons of color are less likely to join NASW and are hence underrepresented in this analysis.

African Americans represent more than half of all clinically trained social workers of color and 4.3 percent of the total clinically trained social workers, according to NASW data. Asian/Pacific Islanders represent 1.8 percent; Hispanics, 1.3 percent; and American Indian/Alaskan Native, 0.6 percent. Although the school social work statistical analysis of M.S.W. students indicates greater participation by persons of color (Lennon, 1997), the data again indicate that African Americans represent the majority of persons of color at 12.5 percent. Hispanics represent 4.8 percent, Asian Americans 2.9 percent, and American Indians, 1 percent.

The percentage of clinically trained social workers at different experience intervals is listed in Table 4. Generally, the number of years since completion of education shows a mature profession with good replacement levels. Of note is the percentage of newest graduates with less than 2 years of experience rising from 8.7 percent in 1996 to 13.9 percent in 1998. This probably reflects the popularity of social work, with ever-increasing enrollments, as seen in Table 8. Comparing the school years 1994–95 with 1995–96, the number of B.S.W.s awarded rose 17.6 percent and M.S.W.s rose 11.2 percent. Total enrollment growth was 10 percent for B.S.W. students and 6.4 percent for M.S.W. students.

Distribution of clinically trained social workers by State and region can be found in Table 3. New York and California continue to have the highest numbers, followed by Massachusetts, Illinois, and Michigan. The Mid-Atlantic, East North Central, and South Atlantic are the regions with the highest numbers of clinically trained social workers.

Professional Activities

Changes in practice setting continue to reflect the proliferation of managed care in both the public and private systems. Reflecting the general trend of shrinking inpatient hospital utilization, the numbers of social workers in hospitals fell from 19.2 percent to 11.3 percent. This decline in social work employment in hospitals represents a long-term decline since 1989, when 20.8 percent of social workers were in hospitals. Clinic settings saw an overall growth from 20.2 percent in 1996 to 22.3 percent in 1998. More specifically, while the number of social workers employed in health clinics declined, the number employed in mental health settings grew.

Outpatient mental health settings showed surprising gains as a primary employment setting for 16.4 percent of the clinically trained social workers and 13.5 percent in secondary settings. On the other hand, both individual and group practices showed declines. Individual practices as the primary setting declined from 20.7 percent in 1996 to 18.1 percent in 1998. Still, this is a gain since 1989, when only 13.7 percent were in individual practice. Individual practices represent a larger percentage of the total as a secondary setting but showed a decline from 43.8 in 1996 to 34.9 percent in 1998. Group practices declined from 7.2 percent in 1996 to 5.1 percent in 1998 in primary settings and from 15 percent to 7.7 percent in secondary settings. It is possible that managed care's high hassle factor and difficulty in gaining reimbursement status have encouraged some social workers to leave private practice to become employees of clinics.

Academic settings have seen a growth in participation by social workers, rising to 20.1 percent in 1998 from 8.6 percent in 1996. University/colleges as primary settings have grown from less than 1 percent in 1996 to 8.8 percent in 1998. University/college setting grew even more in secondary settings, from 1.8 percent in 1996 to 11.8 percent in 1998. Gains probably reflect the large increases in student enrollments noted previously. Social work practice in elementary schools has had modest increases from 7.7 in 1996 to 8.3 in 1998 as primary employment settings, but remained almost constant in secondary settings.

Social services agencies rose from 16.2 percent in 1996 to 20.1 percent in 1998 as primary settings. On the other hand, as a secondary setting, social services declined from 8.8 in 1996 to 4.7 in 1998. And both are declines from 1989 data, when 27.4 percent of social workers were in social service agencies. Nursing homes as primary settings also declined from 5.0 in 1996 to 2.6 in 1998.

The data in Table 7 describing type of work activity are not comparable to other professional groups in that the NASW survey requires respondents to select only one activity. Although patient care/direct service is still the largest category, it decreased from 91.7 percent in 1996 to 69.1 percent in 1998. Administration and supervision showed less dramatic declines, from 34.9 percent in 1996 to 30.9 percent in 1998. Teaching represented 11.1 percent in 1996 and 9.2 percent in 1998. Research continues to be a small part of what social workers do; about 1.7 percent identified it as their least frequent activity.

Psychiatric Nursing

Educational preparation for the practice of psychiatric nursing begins at the prebaccalaureate level. While there are registered nurses practicing in psychiatric settings who received their professional education through associate degree and hospital diploma programs, the nursing profession endorses the baccalaureate degree in nursing as the basic education required for beginning general practice in psychiatric nursing. Nurses prepared at the baccalaureate level are considered generalists and may be employed in psychiatric specialty settings or may work with clients with mental illness in other general health care settings. The American Nurses Association (ANA) provides a certification process and examination for generalist psychiatric nurses as well as a certification for advanced practice psychiatric nurses.

Advanced practice psychiatric nurses are educated in graduate programs and are required to complete at least a master's degree in psychiatric nursing. In the past several years, another psychiatric nursing educational and practice model has emerged—the psychiatric nurse practitioner. Psychiatric nurse practitioners complete a master's degree in psychiatric nursing, including graduate educational requirements for practicing as family or adult nurse practitioners, and they are certified as psychiatric-mental health nurse practitioners (PMH-NPs). In 1988, an estimated 13,045 nurses had graduate education in psychiatric mental health nursing. The ANA national certification program credentials psychiatric nurses as certified clinical specialists in adult and/or child and adolescent psychiatric mental health nursing. In 1995, 6,800 nurses were certified as specialists in psychiatric-mental health nursing. In addition, some States have procedures for credentialing advanced practice psychiatric nurses.

The requirements for ANA certification as a psychiatric nurse clinical specialist include successful completion of a graduate degree in psychiatric mental health nursing, supervised clinical practice for a required number of hours in the degree program, and successful completion of a written examination. Until recently, certification could be granted to nurses who had obtained graduate degrees in related fields (e.g., social work or psychology). However, certification now requires graduate education specifically in psychiatric mental health nursing.

The data presented in the tables of this chapter reflect information only on nurses with graduate degrees in psychiatric mental health nursing. Ninety-four percent of the nurses were prepared as clinical nurse specialists (CNSs), and 13 percent were prepared as nurse practitioners (NPs). Eighty-six percent are best classified as CNSs, 6 percent as NPs, and 8 percent as dually CNS and NPs. Thirty-two percent are recognized by State licensure/regulations as advanced practice nurses. The ANA also certifies a subset of these nurses (47 percent) as clinical specialists in psychiatric nursing.

Demographic and Training Characteristics

In 1988, an estimated 13,045 nurses had graduate degrees in psychiatric nursing. According to data from the National League for Nursing (NLN) (Merwin, 1998), there were 5,001 graduations from psychiatric mental health programs between 1988 and 1996. This study estimates the number of such nurses as 17,318 (Merwin, 1998). While the total number of graduate trained psychiatric nurses has increased somewhat, work patterns have changed dramatically. In 1988, 19 percent of clinically trained nurses were not working, compared with 11.5 percent in 1996. The percentage of part-time employed nurses declined from 27 percent to 26 percent during this 8-year period. As Table 1 shows, there are an estimated 15,330 employed nurses, 74 percent of whom are employed full-time; 99 percent are employed in nursing.

Table 2 shows that 93 percent of psychiatric nurses are female, and 95 percent are white. The percentage of men increased from 4.2 percent in 1988 to 6.9 percent in 1996. Less than 5 percent of female graduate-prepared nurses are under age 35; in 1988, 18 percent of such nurses were under age 35. This trend continues with the decline in percentages of nurses in the 35 to 44 age group categories. The average age of female graduate-prepared psychiatric nurses was 48 years. The percentage of white nurses declined slightly, from 96 percent in 1988 to 95 percent in 1996, still reflecting the underrepresentation of minorities as psychiatric nurses.

Table 3 shows the number of nurses in each region of the United States. The greatest percentage of advanced practice nurses reside in the South Atlantic, East North Central, and Middle Atlantic areas of the country.

Table 4 shows that over 50 percent of the nurses received their highest degree in nursing over 10 years ago. The percentage receiving their highest degrees in recent years may be influenced by master's-prepared psychiatric nurses returning for doctoral education.

Table 5 shows that 65 percent of the clinically trained, advanced practice full-time employed nurses hold one position in nursing. Sixty-three percent of part-time nurses do so. Table 6 reflects the primary work setting of advanced practice psychiatric nurses. Hospitals continue to be the most frequent employment site. There is a slight increase (from 8.5 percent to 9.7 percent) in the nurses working in solo or group practice settings. Of concern is the decline in the number of nurses working in outpatient mental health clinic settings. In 1988, 15.4 percent worked in these settings, compared with 7.8 percent in 1996. However, an additional 3.2 percent are working in other health care clinics. Nearly 19 percent are employed in university settings, while just over 5 percent are working in elementary and secondary schools.

Table 7 shows that 84 percent of employed clinically trained psychiatric nurses are involved in patient care and direct service. Thirty-seven percent of these nurses report their dominant function as direct patient care, followed by teaching (13 percent), administration (10 percent), supervision (5 percent), consultation (3 percent), and research (2 percent).

The number of nurses enrolled in graduate education in psychiatric nursing continues to decline. The number of graduates decreased from 781 in 1979–80 (which was an undercount) to 426 in 1998 (Table 8). Psychiatric nursing leaders have documented this decline since the early eighties (Chamberlain, 1983, 1987). As of 1998, there were 1,274 enrollees in psychiatric mental health graduate programs, with only 36 percent (458) enrolled full-time and 64 percent (816) enrolled part-time. There has been a steady decrease in enrollees. Additionally, in recent years, a decrease in the percentage of students enrolled full-time has contributed to the decline in graduates in any one year; however, from 1996 to 1998 there was a 10 percent increase in the percentage of full-time students.

Professional Activities

Several trends are occurring in the education and practice of specialty psychiatric mental health nursing. The recent proliferation of nurse practitioner educational programs in all clinical specialty areas, including psychiatric nursing, is producing a different nursing workforce than previously existed. In 1991, few nurse practitioner students (only 89, or 2 percent) specialized in psychiatric nursing (NLN, 1994, pp. 107–108). In 1994, there were 364 enrollees of such programs with 70 graduates (NLN, 1996). In 1996, there were 483 enrollees of NP programs and 100 graduates.

Enrollees of graduate programs in psychiatric mental health nursing are enrolled in either nurse practitioner, advanced clinical practice, or teaching programs. In 1991–92, 8 percent of graduates were from nurse practitioner programs, 84 percent from advanced clinical practice programs, and 8 percent from teaching programs (NLN, 1994, p. 111). In 1998, 35 percent of graduates were from nurse practitioner programs, 60 percent from advanced clinical practice programs, and 5 percent from teaching programs. By 1994, enrollees' choice of program also shifted. Twenty-two percent of enrollees in graduate psychiatric mental health nursing were in nurse practitioner programs, 74 percent in advanced clinical practice programs, and 4 percent in teaching programs (NLN, 1996). In 1998, 35 percent were in NP programs, 60 percent in advanced clinical practice programs, and 5 percent in teaching programs, paralleling graduation rates (NLN, 2000–2001). In 1998, there were 444 enrollees of NP programs and 148 graduates (NLN, 2000).

In response to changes in the Nation's health care delivery system and the proliferation and acceptance of nurse practitioners in primary and specialty health care settings, many graduate programs in psychiatric nursing now offer specialty preparation that allows for several different options for the advanced practice psychiatric nurse (Pasacreta et al., 1999). There are currently three major advanced practice specialty preparations: (1) clinical nurse specialist; (1) combined clinical specialist/nurse practitioner; and (3) psychiatric nurse practitioner. Clinical nurse specialists are prepared to have a high degree of proficiency in therapeutic and interpersonal skills in order to work with individuals and families. In some States, clinical nurse specialists who are certified in psychiatric nursing have prescriptive authority. Nurse practitioners have prescriptive authority in 49 States and the District of Columbia.

Advanced practice nurses who are dually certified as psychiatric clinical nurse specialists and nurse practitioners are prepared to offer both primary mental and physical health care to children, adults, or families (depending on the specialty focuses). These nurses must complete the requirements for both the nurse practitioner and clinical nurse specialist certification, necessitating a lengthy master's-level program. However, many nursing leaders believe that advanced practice psychiatric nursing is moving toward a single role that combines the therapeutic skills of the psychiatric clinical nurse specialist with the physical assessment skills of the nurse practitioner (McCabe and Grover, 1999). The psychiatric nurse practitioner has developed from the interest in and need for a combined advanced practice role for psychiatric nurses.

Psychiatric nurse practitioners are registered nurses with a graduate degree in nursing who are prepared to deliver primary mental health and psychiatric care to clients and families (ANCC, 2000). The American Nurses Credentialing Center is developing a certification examination for psychiatric nurse practitioners that will be administered for the first time in late 2000. The credential requires completion of a master's or post-master's degree program with course work including advanced health assessment, pathophysiology, pharmacology and/or psychopharmacology, and diagnosis and medication management of psychiatric illnesses, together with supervised clinical training.

Counseling

The American Counseling Association defines professional counseling as the application of mental health, psychological, or human developmental principles, through cognitive, affective, behavioral, or systemic intervention strategies, that address wellness, personal growth, or career development, as well as pathology.

Counselors work, in the broad view, in a variety of settings, including community and government agencies, schools and colleges, business, and private practice. In addition to the traditional roles of individual counseling and supervision, counselors perform a variety of other functions related to the prevention of problems and the promotion of healthy development, including consultation, outreach, education, and other forms of indirect service.

Since the beginning of the 20th century when Frank Parsons began what we think of as professional counseling, one of counseling's most salient characteristics has been how much it has been and continues to be dependent on the socioeconomic and political context of the era. Professional counseling has its origins in the social reform movements of the late 19th century and the early 20th century. As O'Brien (1999) has noted, "social justice or social change work can be defined as actions that contribute to the advancement of society and advocate for equal access to resources for marginalized or less fortunate individuals in our society" (p. 2). One manifestation of the changes occurring early in the 20th century was the shift from an agrarian society to an industrial society. This shift was accompanied by both bureaucratization of organizations and the specialization of the workforce. The vocational guidance movement developed with the goal of helping people adjust to these major lifestyle changes.

Commonly referred to as the father of guidance and counseling, Frank Parsons established the Vocational Bureau of Boston in 1908 (Gibson and Mitchell, 1995). Parsons was an advocate for youth, women, the poor, and the disadvantaged (O'Brien, 1999). His book, *Choosing a Vocation,* was published in 1909 shortly after his death. This book outlined his model of career guidance, which provided a basis for the career counseling of the time. Although career guidance took place initially in community agencies, it soon became popular in school settings as well.

Paralleling Parsons' work in vocational guidance was a companion movement to establish specialized clinics to assist children. Also, during the same time period (1908), Alfred Binet developed the first individual intelligence test (Kimble and Wertheimer, 1998). Binet believed that guidance toward a career should be based on the measurement of abilities. The clinics were primarily focused on the emotional and behavioral problems of disturbed children and thus tended to focus on the assessment and treatment of individual pathology. Thus counseling, which at first focused on vocational guidance (armed with assessment instruments) but later expanded to include work with those with emotional distress, grew out of a response to social needs.

National legislation helped the development of the counseling profession. During the era following World War II, the Federal Government developed and funded a variety of mental health services. For example, the National Mental Health Act of 1946 established the National Institute of Mental Health, which marked the beginning of publicly funded mental health services. At this point, the Veterans' Administration also began to see the need to help returning veterans readjust to civilian life, both vocationally and personally, and employed professionals to assist them in this process.

Another significant piece of legislation that had a great impact on the counseling profession was the Community Mental Health Centers Act of 1963. This act resulted in a substantial increase in employment opportunities for counselors across the country. Community mental health centers have traditionally employed a significant number of professional counselors. Many who worked in this environment went on to establish independent private practices.

The passage of the National Defense Education Act (NDEA) in the late 1950's made it possible for graduate schools of education to establish funded programs to train guidance counselors. This decision became a landmark, linking personal needs and education with our Nation's well-being. The NDEA provided grants to States for stimulating the establishment and maintenance of local guidance programs, and grants to institutions of higher education for the training of guidance counselors to staff local programs (Gibson and Mitchell, 1995). The intent of the school counseling addressed in the act was to establish a national cadre of counselors adept in helping students plan for post-high school education. More specifically, Congress wanted talented math and science students to be screened and encouraged to further their education.

Thus, in an indirect but significant manner, the Soviet space and arms race gave rise to the establishment of counselor education programs across the Nation. Although school counselors began to serve a much broader role than envisioned by the NDEA, there is no question that the act provided a base from which counseling could grow. By the mid-1960's, notable contributions achieved by the act could be easily identified. These contributions included supporting 480 institutes designed to improve counseling capabilities and granting 8,500 graduate fellowships, which was a step toward meeting the needs of many college teachers. By the end of the 1960's, more than 300 academic units housed counselor education postgraduate training programs.

Early counseling activities tended to be directive and counselor-focused. This approach was challenged by Rogers (1942), with the publication of his landmark book *Counseling and Psychotherapy,* which had a profound impact on the way counseling was viewed. Rogers' book emphasized a nondirective, client-centered approach to counseling. As Smith and Robinson (1995) noted, Rogers' client-centered theory also emphasizes the client as a partner in the healing process, rather than as a patient to be healed by the therapist. This emphasis on the importance of the relationship continues to be a hallmark of much counseling theory and practice. With this foundation, counselors use an appropriate combination of other theories, techniques, and assessment instruments to help clients achieve coconstructed goals.

While there is considerable overlap among the helping professions, counseling can be distinguished by its developmental and preventative orientation as well as its focus on the individual within an environmental context. Counseling thus takes a broad view of mental health care, emphasizing the developmental, preventative, and educational aspects in addition to the traditional focus on the remedial treatment of illnesses. "Simply stated, mental health counseling believes that a person does not have to be sick to get better" (Smith and Robinson, 1999, p. 158).

Formal recognition of counseling as a unique profession has been fostered by the establishment of a professional counseling organization, accreditation standards for counselor training programs, and certification and licensure for counselors. The American Counseling Association (ACA), established in 1952 as the American Personnel and Guidance Association, resulted from the merger of the National Vocational Guidance Association, the American College Personnel Association, and the National Association of Guidance Supervisors and Counselor Trainers. These four organizations then became the founding divisions of the umbrella association, ACA. Since that time, several other specialty areas have been developed under the auspices of the umbrella organization, based on interest and societal need. For example, those interested in gerontological counseling, and marriage and family counseling, as well as several others, have formed divisions within ACA. While not all professional counselors are ACA members, its membership represents the various specialty and interest areas in the field.

The increasing number of States that are passing licensure and certification laws for master's-level practitioners indicates the increased acceptance of counseling as a unique and legitimate profession in the panoply of mental health service providers. Currently, 45 States plus the District of Columbia and Guam have regulations for the counseling profession, with 4 other States developing such regulations. The 108,000 credentialed professional counselors work in a large number of settings, assisting clients with a wide variety of problems.

Demographic and Training Characteristics

For the purpose of collecting data for this chapter, emphasis was placed on the number of clinically trained counselors. Clinical training was reflected by creating an unduplicated total of National Certified Counselors (NCCs) and licensed counselors by State. Where licensure numbers were unavailable, in States without counseling licensure, totals were determined by using the number of NCCs with an estimated number of licensable counselors using data from similar States. The total number of counselors reflected in Table 1 is the sum of these State totals. The ratios and percentages reflected in the remaining tables are based on National Board for Certified Counselors database queries 2000, American Counseling Association membership statistics, a 1999 National Job Analysis of the Professional Counselor, and Hollis (2000) Counselor Preparation 1999–2001.

In addition to licensure, counseling has an accrediting body for its training programs. The Council on Accreditation of Counseling and Related Education Programs (CACREP) has established educational standards for master's- and doctoral-level counselor training programs. Currently there are 129 accredited institutions, and this number is growing rapidly. The influence of the CACREP standards goes far beyond their role with accredited institutions, however. The standards often serve as guidelines for the development of State licensure or certification requirements. Nonaccredited counselor training institutions also typically organize their programs around these same standards. Thus, the CACREP standards have helped to ensure uniformity in training across the field.

The National Board for Certified Counselors (NBCC), established in 1982, certifies professional counselors. Along with CACREP, NBCC has had a significant impact on the field. It provides a registry of those who have met NBCC's national certification standards. These professionals are entitled to use the designation NCC. In addition to serving as a national registry, an NBCC examination instrument, the National Counselor Examination (NCE), is required by most States for licensure or certification. NBCC has five specialty certifications, including the clinical mental health counselor specialty certification that is used for CHAMPUS payments and other clinical work. This certification requires a 60-credit-hour master's degree as well as clinical supervision, taped counseling samples, and the National Clinical Mental Health Counseling Examination.

Much valuable information regarding counselor preparation is provided in the book *Counselor Preparation 1999–2001* (Hollis, 2000), which is the tenth edition in a longitudinal study of counselor training. According to Hollis, there are 542 entry-level counselor training programs in the country, of which approximately 30 percent are accredited by CACREP. As shown in Table 8, there were 19,576 master's students in 1999. At the doctoral level, there are currently 54 programs, 39 of which are CACREP accredited. In 1999, there were 1,061 students in these doctoral programs, for a total of 20,637 counselor trainees across the country.

Professional Activities

Today's counselors (along with other mental health professionals) are faced with a world of rapid change. Among others, these changes include the changing face of the health care delivery system and responses to the extreme socioeconomic changes that are a part of the national scene. In a world of instant communication, it is clear that counselors will be using technology to provide services in new and different ways. Counselors will continue to respond to changing societal needs in ways that we cannot yet envision.

Marriage and Family Therapy

Marriage and family therapists (MFTs) are mental health professionals trained in psychotherapy and family systems and licensed to diagnose and treat mental and emotional disorders within the context of marriage, couples, and family systems.

Marriage and family therapy grew out of the public's demand for professional assistance with marital difficulties, and from the development of a family systems therapy orientation by psychotherapy professionals and others (Nichols, 1992). From their beginnings in the 1930's and 1940's, MFTs have developed into uniquely qualified health care professionals who are federally recognized as a core mental health discipline, along with psychiatry, psychology, social work, and psychiatric nursing (clinical training and instruction and clinical traineeships; stipends and allowances; research projects, 42 U.S. Code 242a).

Federal law defines an MFT as "An individual (normally with a master's or doctoral degree in marital and family therapy, and at least two years of supervised clinical experience) who is practicing as a marital and family therapist and is licensed or certified to do so by the State of practice; or, if licensure or certification is not required by the State of practice, is eligible for clinical membership in the American Association for Marriage and Family Therapy" (Designation of health professional(s) shortage areas, 42 CFR Part 5).

MFTs apply both psychotherapeutic and family systems theories and clinical interventions to the delivery of health care services to individuals, couples, and families. They diagnose and treat mental and emotional disorders, whether cognitive, affective, or behavioral in origin. Research has found the services provided by MFTs to be effective for many severe disorders (often more effective than standard treatments) and to result in improved outcomes in both the health and functioning of clients (Doherty and Simmons, 1996; Pinsof and Wynne, 1995).

The profession of marriage and family therapy has burgeoned since the 1970's, with the number of therapists increasing from an estimated 1,800 in 1966 to 7,000 in 1979, to over 40,000 in the 1990's.

Demographic and Training Characteristics

An estimated 44,000 marriage and family therapists were clinically active in the United States in 1998 (Table 1). Female practitioners (55 percent) slightly outnumber male practitioners (Table 2), and the mean age of MFTs is 52 years (Doherty and Simmons, 1996).

Consistently, African Americans and those of Hispanic descent are underrepresented among MFTs, compared with their proportions in the U.S. population. The ratios of MFTs of Asian origin and Native Americans are more in line with their representation in the total population. As with the other mental health disciplines, whites are significantly overrepresented, making up 95.5 percent of MFTs, compared with 75.6 percent of the U.S. population. Differences exist, however, between males and females. There are slightly more minorities among male than female MFTs (5.2 percent versus 3.9 percent). Increased representation of minorities among MFTs appears promising. Over 12 percent of the student members of the American Association for Marriage and Family Therapy (AAMFT) are from minority population groups, according to a 1995 AAMFT Membership Survey.

An examination of Table 3 reveals that the distribution of marriage and family therapists varies considerably across the United States. These variations can be explained by the existence (or lack thereof) of State regulation of the practice of marriage and family therapy and/or the presence of accredited university/college training programs.

In 1998, an estimated 9,200 individuals were in training to be MFTs (Table 8). This includes an estimated 7,696 students in 171 master's degree programs, 741 students in 19 doctoral degree programs, and 840 in 28 postdegree programs. Nearly 3,000 students were estimated to have graduated from these programs during 1998.

The primary agency recognized by the U.S. Department of Education for the accreditation of clinical training programs in marriage and family therapy at the master's, doctoral, and postgraduate levels is the Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE) of AAMFT. COAMFTE accreditation is required to enable accredited programs to establish eligibility to participate in Federal programs. COAMFTE is also recognized by the Council for Higher Education Accreditation (CHEA, formerly CORPA), a nonprofit organization of colleges and universities that coordinates and provides oversight of accrediting bodies. As of 1998, there were 48 master's degree programs, 14 doctoral degree programs, and 16 postgraduate clinical training programs in 35 States accredited, or in candidacy status, by COAMFTE.

Most marriage and family therapists in clinical practice hold a master's degree (54.3 percent), including 12.7 percent who hold the M.S.W. degree. About 40 percent of MFTs hold a doctoral degree, including the degrees of Ph.D. (24.6 percent), Psy.D. (1.7 percent), Ed.D. (7.2 percent), M.D. (1 percent), and D.Min. (4.9 percent) (Doherty and Simmons, 1995).

The majority (55.3 percent) of the estimated 4,400 clinically active MFTs in 1998 are estimated to have completed their training between 6 and 15 years ago, making them highly experienced therapists as a group. Only 2.3 percent completed their training within the past 2 years (Table 4).

In-service education requirements vary greatly among the State marriage and family therapy regulatory boards. Many States have no formal continuing education requirements, presumably because of the cumbersome and expensive bureaucratic mechanisms necessary to monitor and enforce the regulations and to evaluate and sanction the providers. For those States with continuing education requirements, the typical requirement is between 30 and 40 hours per 2-year renewal cycle (Sturkie and Johnson, 1994).

Professional Activities

In 1998, most MFTs (67.5 percent) work full-time (Table 1), usually in one setting (60.4 percent) (Table 5), that is, a private solo or group clinical practice (65.2 percent) (Table 6). While most MFTs are in private practice, the distribution between solo and group practices appears to be changing. According to a 1995 AAMFT Membership Survey, over a third of those in private practice reported being in group practices, including both group medical and behavioral health care group practices.

Also, growing numbers of MFTs are employed in organized care settings. Nearly one in five (19.4 percent) now work in community mental health centers and other community clinics and agencies, hospital inpatient and outpatient units, and other settings such as employee assistance programs and health maintenance organizations (Table 6). The 1995 AAMFT Membership Survey suggests that those in the Another/not specified employment setting include about 6 percent in academic settings and 2 percent employed as consultants to businesses.

Increasingly, as shown in Table 7, MFTs are involved in roles other than direct treatment, such as administration of human service and agency settings (56.0 percent), teaching (46.7 percent), research (16.5 percent), and other activities such as prevention program development, public welfare (especially child welfare through family preservation services), public policy development, client advocacy, consultation to businesses, and more recently, managed care case managers.

MFTs treat the full spectrum of American society. Over half of the clients seen are female (58 percent). Nearly 12 percent of the clients are racial and ethnic minorities, and 64 percent of MFTs say they feel competent from their training to treat racial and ethnic minorities (Doherty and Simmons, 1996). About half of the adult clients of MFTs have a college or postgraduate degree, while the other half have a high school degree and some college. Clients range in age from 1 to 74, with a median of about 38 years old (Doherty and Simmons, 1996).

Marriage and family therapists treat a wide range of individual, couple, and family problems. Depression is most often the presenting issue (43.9 percent), followed by individual psychological problems (35.1 percent), marital problems (30.1 percent), and anxiety (21.1 percent). The *DSM-IV* diagnoses most frequently used are adjustment disorder (25.3 percent) and depressive disorder (including dysthymia) (22.9 percent). The other diagnoses used in more than 5 percent of the cases are anxiety disorders, including posttraumatic stress disorder (14 percent) and personality disorder (6.5 percent). V-codes are used in only 10.6 percent of all cases (Doherty and Simmons, 1996).

The presenting problems treated by MFTs tend to be severe. Nearly half (49 percent) of the problems are rated as severe or catastrophic; another 45 percent moderately severe; and 6 percent mild. The severity of client problems is further supported by the fact that 29.3 percent of clients are taking psychotropic medication; 2 percent had been hospitalized in the past year; and 6.1 percent were hospitalized while under treatment by an MFT (Doherty and Simmons, 1996).

Despite their focus on family systems, MFTs do not treat only couples and family units. Indeed, half of the cases seen by MFTs are individuals (49.4 percent); 23.1 percent are couples, and 12 percent are families (Doherty and Simmons, 1996).

Clients report being highly satisfied with the services of MFTs. In a recent national survey of clients, nearly all (98.1 percent) rated the services as good or excellent; 97.1 percent said they got the kind of help they wanted; and 91.2 percent said they were satisfied with the amount of help they received. Furthermore, 94.3 percent said they would return to the same therapist in the future, and 96.9 percent said they would recommend their therapist to a friend (Doherty and Simmons, 1996).

Overwhelmingly positive changes in functioning also were reported by clients: 83 percent reported that their therapy goals had been mostly or completely achieved. Nearly 9 out of 10 (88.8 percent) reported improvement in their emotional health; 63.4 percent, improvement in their overall physical health; and 54.8 percent, improvement in their functioning at work (Doherty and Simmons, 1996).

Treatment by MFTs is naturally brief and cost-effective. The average length of treatment is 11.5 sessions for couples therapy, 9 sessions for family therapy, and 13 sessions for individual therapy. The average fee is $80 per hour, which makes the average cost per case $780 (Doherty and Simmons, 1996). As of 1998, 41 States regulate the practice of marriage and family therapy, with most other States considering licensure bills. California was the first State to regulate the profession in 1963 (under the title Marriage, Family and Child Counselor), followed by Michigan in 1966 and New Jersey in 1968. The most impressive growth in State regulation began in the 1980's, with the vast majority (86 percent) of State regulatory laws being adopted since 1980.

All these laws regulate MFTs at the independent level of practice. The most common title of the license is Licensed Marriage and Family Therapist (31 States), while 7 States use the title Licensed Marital and Family Therapist; 3 States use the title Certified Marriage and Family Therapist. During 1998, several State legislatures continued the trend in the regulation of marriage and family therapy of changing their laws from title protection laws to practice protection laws. Also, California's law was amended, effective July 1, 1999, to change the licensed title of Marriage, Family and Child Counselor (MFCC) to Licensed Marriage and Family Therapist (1998 Cal. Legis. Serv. Ch. 108 (A.B. 1449)), making California's title consistent with that of most other States.

States' definitions of the practice of marriage and family therapy vary in the specific language used, but are consistent with AAMFT's Model Licensure Law, which follows:

> "Marriage and family therapy" means the diagnosis and treatment of mental and emotional disorders, whether cognitive, affective, or behavioral, within the context of marriage and family systems. Marriage and family therapy involves the professional application of psychotherapeutic and family systems theories and techniques in the delivery of services to individuals, couples, and families for the purpose of treating such diagnosed nervous and mental disorders.

While the overwhelming majority (80.8 percent) of the 44,000 MFTs nationwide hold a State marriage and family therapy license or certification, half (50.4 percent) hold additional professional licenses. This reflects the multidisciplinary nature of marriage and family therapy. The licenses held in addition to the marriage and family therapy license include psychologist (7.2 percent), social worker (10.0 percent), professional counselor (12.5 percent), and nurse (1.1 percent) (Doherty and Simmons, 1996). Just under one-third (30.4 percent) of MFTs hold only a marriage and family therapist license, and 12.4 percent hold three or more licenses. Regardless of their training, the preponderance of MFTs (60.6 percent) describe their primary professional identity as marriage and family therapist (Doherty and Simmons, 1996).

Psychosocial Rehabilitation

Psychosocial rehabilitation (PSR) is a rapidly growing approach to working with individuals with severe mental illness in the community. Specifically, psychosocial rehabilitation programs usually provide residential services, training in community living skills, socialization services, crisis services, residential treatment services, recreation services, vocational rehabilitation services, case management services, and/or educational services. In recent years, PSR has been identified as a necessary ingredient for maintaining persons with severe mental illness in the community. PSR services reduce hospitalization, increase employment, and increase the quality of life of persons served. Thus, PSR services are an important part of mental health care in the community, addressing practical, day-to-day needs, such as housing, income, work, friends, and the skills to cope with serious mental illness.

The focus of PSR activities is in teaching individuals with severe mental illness the skills necessary to attain goals of their choice in the community and in developing innovative supports. In providing these services, PSR providers draw upon theories and practices of psychology, education, sociology, social work, and rehabilitation. In addition, PSR has been at the forefront of disability and rehabilitation movements working toward the empowerment of individuals with severe mental illness through the delivery of services and the integration of the client and the services into the normal life of the community. PSR has been successfully utilized with individuals who have disabilities other than mental illness, and those who have concurrent disabilities of substance abuse, mental retardation, and hopelessness as well as deafness and other physical disabilities. Specialized programs have also been developed for individuals over 65 years of age.

The importance and success of the field is evidenced by its rapid growth. In 1988, 965 facilities identified themselves as offering PSR services. In 1990, 2,200 facilities were identified as offering PSR services to persons with severe mental illness. By 1996, 7,000 facilities were identified. With an average agency staff size of 16, a conservative estimate of the PSR workforce is 100,000 (Table 1).

Demographic and Training Characteristics

Like other mental health workers, PSR workers are predominantly female (65 percent) (Table 2) and white (70 percent); 21 percent are African American, 6 percent are Hispanic, 2 percent are Asian, and .04 percent are Native American. Their average age is 38, and they have been in the field for an average of about 15 years (Table 4). Those with advanced degrees have been in the field for an average of 8 years. PSR workers can be found in all 50 States, the District of Columbia, and the Virgin Islands.

Thirty-eight percent of all PSR workers have a bachelor's degree, 22 percent have only a high school degree, 13 percent have some college or an associate degree, 24 percent have a master's degree, and 2 percent have a doctoral degree. Twenty-five percent of PSR workers with bachelor's degrees are currently working to attain a master's degree. Among PSR workers with master's or doctoral degrees, 24 percent have degrees in psychology, 36 percent in social work, 4 percent in psychiatry, 3 percent in counseling, and 3 percent in education. Sixteen percent have licenses or certificates in social work; 8 percent are certified as counselors; 6 percent are certified as teachers; and 3 percent are certified as addiction counselors.

As the value of PSR has become recognized, academic programs have developed that specialize in PSR or include PSR as a specialized part of their curriculum. Currently, throughout the Nation, there are 13 Ph.D. programs; 3 combined M.D. and Ph.D. programs; 10 master's-level programs; 1 bachelor's program, and 1 associate program. The number of programs is expanding rapidly as the field grows.

Because PSR encompasses an approach, a philosophy, and patterns of interpersonal interactions as well as didactic material, many agencies hire interested, caring people and train them on the job, through supervision, in-service training, and experience. In-service training, which imparts various combinations of knowledge, attitudes, and skills, is provided in 19 States, by 7 county-level mental health authorities, 21 agencies, and 15 centers or institutes, 8 of which are affiliated with universities. These workshops and training sessions, which may last from 1 to 3 days, typically cover principles and values of PSR, functional assessment, choosing a rehabilitation goal, employment, case management, supported housing, teaching skills, stigma/discrimination issues, cultural diversity, clinical interviewing skills, program evaluation/research, supported employment, and career development. It is typical for a practitioner to emphasize one of these fields over another.

Professional Activities

Thirty-six percent of PSR workers are employed in residential programs; 32 percent in daytime facility-based programs; 15 percent in case management; 9 percent in vocational; and 6 percent in other areas. A majority are employed in a single setting (Table 5).

PSR has taken a number of steps toward establishing itself as a distinct professional field. It has developed a credentialing program called the Registry for Psychiatric Rehabilitation Practitioners. Many States are in the process of adopting the registry as a credential for this workforce. This program screens applicants for experience, education, training, and knowledge of psychosocial rehabilitation. Individuals who apply for the registry must meet certain educational requirements, have had minimum levels of experience in the field, demonstrate written competence in the principles and practices of PSR, and provide evidence of ongoing training as well as references from three individuals familiar with their work.

Parallel to this process, competencies needed by PSR workers have been identified. These competencies have been derived from empirical literature that proves the efficacy of certain interventions and from experience in the field. These competencies include knowledge and skills in the areas of mental illness, specialized techniques of rehabilitation, establishing strong relationships with consumers, accessing community resources such as families and self-help groups, cultural competency, and developing programs and relationships that promote recovery. The International Association of Psychosocial Rehabilitation Services (IAPSRS) has also developed standards for the implementation of psychiatric rehabilitation in the form of Practice Guidelines for the Psychiatric Rehabilitation of Persons with Severe and Persistent Mental Illness.

IAPSRS worked closely with the Commission on Accreditation of Rehabilitation Facilities (CARF), the Joint Commission for Accreditation of Health Care Organizations, the Council on Accreditation, and the Leadership Council in this process. These guidelines were created by experts in the field based on research in the field and were validated by a field review by practitioners. These guidelines describe psychiatric rehabilitation approaches and interventions that are responsive to individual needs and desires and enhance recovery. Included are such areas as assessment, rehabilitation planning, skills teaching in all areas of functional limitations, facilitation of environmental supports, encouraging participation in community support and social activities, mental illness management, cognitive interventions, and methods of working with co-occurring disabilities. IAPSRS has also developed a code of ethics for its practitioners, with a process of adjudication for violations.

The body of research literature that supports the effectiveness and efficacy of psychosocial rehabilitation has been rapidly growing as its importance in the management of severe mental illness has become firmly established. Psychosocial interventions are reported in many different journals and books. IAPSRS has also taken the lead in developing a set of outcomes measures that can be used by agencies in the field. These measures, which look at many domains of a person's life, have been incorporated into the data sets of other types of rehabilitation.

School Psychology

The application of psychological principles of mental health delivery and assessing/planning services for children with learning problems in educational settings is the primary responsibility of school psychologists. Professional school psychology has grown significantly over the past 30 years. In 2000, it is estimated that over 31,000 school psychologists (Thomas, 2000) certified by State boards of education and/or licensed by State boards of psychological services are practicing in the Nation's schools. Additionally, perhaps thousands more are primarily associated with the discipline as university instructors, full- or part-time private practitioners, or in alternative settings (Fagan and Sachs-Wise, 1994). Most school psychologists are found serving in 15,000 local educational agencies and 85,000 schools, in all States and territories, as well as Department of Defense schools nationally and internationally (Lund and Reschly, 1998; NASP, 1998).

School psychologists are involved in delivering a broad array of services related to mental health services in the schools. These services include consulting with teachers, parents, and school personnel about learning, social, emotional, and behavior problems; developing and implementing educational programs on classroom management strategies, parenting skills, substance abuse, anger management, teaching, and learning strategies; evaluating academic skills, social skills, self-help skills, personality, and emotional development; and intervening directly with students and families (including individual, group, and family psychological counseling), as well as helping solve conflicts related to learning and adjustment. School psychological services are one of the related services available to students with disabilities who need special education and related services as part of the Individuals with Disabilities Education Act (IDEA). School psychological services, as part of the pupil services, are also designated services under Title I and other titles of the 1994 Improving America's Schools Act.

Demographic and Training Characteristics

The professional association representing school psychologists is the National Association of School Psychologists (NASP), which has 22,345 members (NASP, 2000). Demographic data on school psychologists reflected in Tables 1 through 8 are based on data compiled yearly by the U.S. Department of Education (USDOE), Office of Special Education Programs, Data Analysis System (DANS) for its *Annual Report to Congress on the Implementation of The Individuals with Disabilities Education Act* (USDOE, 1997, 1998, 1999), membership surveys by the National Association of School Psychologists (NASP, 1997, 1998, 1999, 2000), and a focused NASP-initiated inquiry regarding the numbers of clinically active school psychologists providing services in the United States (Thomas, 2000). This base number of clinically active school psychologists reflected in the Tables (31,278) provides the most accurate data available on school psychologists who are clinically trained. Data on sex, ethnicity, years of experience, and other demographic information are also reflected in the tables. These data provide an accurate portrayal of the numbers and demographics of school psychologists providing mental health services to children and families.

School psychology is still a relatively young profession. Prior to 1975 about 5,000 school psychologists were reported as being employed in more progressive school systems in urban/suburban areas, primarily in California, New York, Pennsylvania, and Ohio (Fagan and Sachs-Wise, 1994). The recognition of the civil right to education of children with disabilities increased that number to its present level, with a distribution across all communities—urban, suburban, and rural—across all States. As the profession has grown, it has become increasingly more female. Data from a survey conducted in 1986 showed that approximately 59 percent of school psychologists were female. Table 2 shows that by 2000, approximately 70 percent of clinically trained school psychologists are now female. Accompanying this increase in female representation has been a decrease in years of experience. Illustrating this trend, in a survey of the 218 university training programs, 80.5 percent of the 8,324 full- and part-time enrolled students were female (Thomas, 1998).

Ethnic information reported in survey data indicates few minorities in the profession, with a total of approximately 5 percent identified (NASP, 1998). The ethnic distribution has remained relatively the same over the years, and current NASP membership data may underestimate the percentage of minorities in school psychology. A survey of all graduate education programs (Thomas, 1998) indicated that 17 percent of students in training were identified as minority.

The data reported in Table 3 show that school psychologists are not evenly distributed across the Nation (also see Fagan, 1994). Lund and Reschly (1998) reported significant State and regional variations, and most States do not meet the NASP standard of one school psychologist for every 1,000 students. Recent survey data (Curtis, Hunley, Walker, and Baker, 1999) find that 25.5 percent of full-time practicing school psychologists work in settings that are at or below the 1,000:1 ratio, and almost one-half (48.7 percent) work in settings with ratios of 1,500:1 or less. However, 32.5 percent of school psychologists work in settings with ratios of greater than 2,000:1. There is considerable State-by-State variation in student to school psychologist ratios (Thomas, 2000).

All professional school psychologists are required to be certified and/or licensed by the State in which services are provided. Most States use certification and authorize the State's education agency to certify school psychologists. Although requirements vary from State to State, NASP offers a national certification (Nationally Certified School Psychologist, or NCSP) to all those eligible. The national certification is recognized by several States for certification eligibility. The requirements are a master's degree or higher specialist degree in school psychology with a minimum of 60 graduate semester hours; a 1,200-hour internship, 600 hours of which must be in a school setting; a passing score (660) on the National School Psychology exam; and course content to ensure substantial preparation in school psychology. NCSP renewal occurs on a 3-year cycle; NCSPs must submit 75 hours of continuing professional development for renewal.

The students represented in Table 8 are predominantly studying for a 60-credit master's or specialist degree. Seventy-four percent of school psychologists have documented the requirements to be nationally certified (NCSP); 24 percent also hold a doctorate in school psychology, education, or related fields. Although the percentage of school psychologists with a doctorate remains constant, the percentage meeting the requirements for national certification continues to increase. School psychologists who are members of NASP or hold the NCSP are required to abide by the Standards for the Provision of School Psychological Services and Principles of Professional Ethics adopted by NASP (1992).

Nationally, more than 151 school psychology training programs are accredited by NASP/NCATE (Thomas, 1998). At the end of the 1996–97 academic year, 1,897 school psychology students from 218 training institutions became initially certified/licensed to practice in the Nation's schools (Thomas, 1998). The U.S. Department of Education reports yearly that there have been, on average, over 600 unfilled, funded vacancies or additional certified personnel needed for the public schools. Currently, school psychologist shortages exist in most regions of the United States (Lund and Reschly, 1998). A shortage of school psychologists is predicted in the immediate future in light of the increase in retirement rates and the proliferating need for mental health services in the schools. Based on the NASP standard ratio of 1,000 students to 1 school psychologist, it is estimated that another 25,000 school psychologists are needed (Dwyer, 1995).

Professional Activities

Table 6 shows that school psychologists are typically employed in the following settings: public or private schools, universities, clinics, institutions, private practice, and community agencies. However, the majority (approximately 82.6 percent) practices in primary and secondary schools. Recent survey data (Curtis et al., 1999) report that the percentage of school psychologists working in schools varies by setting: urban schools, 30.3 percent; suburban schools, 44.8 percent; rural schools, 24.9 percent. Some school psychologists are employed by mental health agencies that provide psychological services to the schools. Survey data indicate that of those listed as employed in a school setting in Table 6, only 2 percent practice in private schools. There are no officially recognized subspecialties within the profession of school psychology.

The 1998 membership directory of NASP did provide survey data on the percentage of time members spent in various professional activities. Less than half of the school psychologists' time was spent in the assessment of children. Consultation and behavioral and other therapeutic interventions accounted for 30 percent of professional time. The remainder was spent in service training provided and received, administration, and research. Reschly and Wilson (1992) reported 55 percent of time for assessment, 42 percent for consultation and interventions, and 2 percent for applied research and evaluation. Included in the process of assessment is presenting results to parents and school/other staff as well as utilizing assessment information primarily to plan interventions for students experiencing academic or behavioral difficulties in school.

Sociology

The revival of the sociological practice movement can be traced back to the late 1970's (Friedman, 1987), a turbulent era in higher education, during which many academic institutions—particularly small private liberal arts colleges, 2-year private colleges, middle-level private urban universities, and a spate of remote State colleges and universities (Bingham, 1987; Smith and Cavusgil, 1984)—experienced (1) declining enrollments among aging baby boomers and increasing enrollments among nontraditional adult and minority students (Strang, 1986); (2) closures, cooperative arrangements with other institutions, and mergers (Bingham, 1987); and (3) reduced Government funding amid rising education costs, necessitating, in turn, relief from private funding sources, such as alumni, foundations, and corporations (Bryant, 1983). These changes, not typically shared by their larger, private academic counterparts, necessitated a conceptual shift in sociology away from theory and statistical testing, characterizing the discipline's post-World War I efforts to legitimize itself, and toward a return to its original mission of social reform, based on application and intervention (Clark, 1990; Franklin, 1979; Huber, 1984, 1986; Kuklick, 1980; Parsons, 1959). The creation of new hands-on academic incentives—particularly workshops, supervised field work, and internships—was designed to attract the changing student demographic and to respond to the economic constraints mentioned above. Schools also integrated sociology departments into their respective communities and with their publics, thereby balancing students' substantive disciplinary interests balanced with more vocationally oriented courses (Olzak, 1981; Ruggiero and Weston, 1986; cf. Fleming and Roy, 1980).

In an era of managed care, sociologists' entry into the heavily regulated behavioral health care industry has led many of them to realize the value of acquiring supplemental association and State professional credentials. Sociologists understand that without practice credentials, which serve as recognizable indications of their competence in service to the public welfare, health, safety, and the quality of social life, their opportunities as unregulated applied researchers, clinical interventionists, behavioral health care caseworkers, and administrators will continue to decline in this interdisciplinary field. As a result, sociologists have started to organize their own accreditation and credentialing programs. The Commission on Applied and Clinical Sociology, established in February 1995 as a joint initiative of the Society for Applied Sociology and the Sociological Practice Association (both founded in 1978, with the latter chartered as the Clinical Sociology Association), recently completed sociology program accreditation standards and peer-review guidelines for departments interested in augmenting their traditional educational emphases with clinical and applied curriculums and training. These in-house measures, sensitive to evolving behavioral health care training and administration standards, permit practicing sociologists to apply their unique perspectives and skills, assessments, and interventions to the complex set of interactions characterizing social relations between and among sundry behavioral health care populations, providers, networks, payers, employers, and their institutional environments. These concerns and practices have all too often been overlooked or underutilized in the allied health care marketplace. Sociologists' treatments will significantly add to the mix of existing approaches.

The commission implemented its Pilot Sociological Practice Accreditation Program in fall 1997 to evaluate the content and quality of applied and clinical departmental augmentations to traditional liberal arts emphases in the discipline. It reviewed its first Application for Accreditation and Self-Study Report in February 1998, and conducted its first pilot site visit of said department's Applied Sociology Concentration in March 1998. This was followed by its first Accreditation Review Board evaluation in April 1998. A full commission review was slated for June 1998. In fall 1998, the Commission was scheduled to implement its inclusive Accreditation Program to replace its pilot program.

Accredited sociological practice programs and their departments will be included in a National Directory of Applied and Clinical Sociological Practice Programs. Their graduates—beginning with baccalaureates and later masters and doctorates—will be listed in a National Registry of Sociological Practitioners. Once sociological practice legislation is approved, the registry may be used in conjunction with sociological practice credentials awarded by the Sociological Practice Association (SPA) to register, certify, and/or license practicing sociologists with the States in a variety of interdisciplinary practices fields, including social service administration and behavioral health care. Provisions will be made to "grandfather" non-program-accredited, qualified sociologists into the registry as well. Different classes of association and State professional credentials will be awarded on the basis of recipients' specific educational and training accomplishments. Comparable core data will be incorporated into upcoming editions of *Mental Health, United States*.

SPA certification (currently under revision) offers eligible master's and doctoral candidates a Certificate in Clinical Sociology (CCS). According to SPA officials, the association will be certifying approximately 20 practicing sociologists in 1998, adding to its current base of 48 CCS recipients. Since its inception in 1983, the SPA credentialing program has served as a demonstration project for modeling and deploying a comprehensive national program, possibly in conjunction with the American Sociological Association. Future plans, according to SPA officials, will include forming partnerships with other scientific and professional associations and possibly changing the title of the SPA credential to Certificate in Consulting Sociology, based on clinical and applied sociology models.

Current data on practicing sociologists, particularly for those employed in behavioral health care fields, are limited to the disparate studies of independent researchers. To date, there have been no discipline-wide or association-sponsored sociology performers to generate exhaustive findings for the entire population of postsecondary educated and trained and active practitioners, though such efforts are being considered by the Commission on Applied and Clinical Sociology. The Open System Practitioner Survey, recently conducted by Mental Health Update coauthor Michael S. Fleischer (1990), canvassed a nonrepresentative sample of 217 sociologists, graduates at all degree levels of 10 of 37 postsecondary institutions in the tri-State Chicago metropolitan area between 1977 and 1992; 69.5 percent of these individuals reported current or previous employment in the academic and nonacademic workplace and professional marketplace, with less than one-third practicing in academic settings and over two-thirds practicing in nonacademic settings; 21.8 percent of these self-reported practitioners work in mental health care and allied medical health care fields, domains that comprise the second largest industry for applied and clinical sociologists behind the aggregate of law, social policy, and community service, in which 23.1 percent work.

Noteworthy is the fact that 9.2 and 2.6 percent of these practicing sociologists reported single or multiple professional association credentials, respectively (all nonsociological), and 25.8 and 3.3 percent, respectively, reported single or multiple State professional credentials (all nonsociological by default). Generalizable only to the sample that confirmed residence and employment in the referenced region between August and November 1993, 42 percent of these practicing sociologists, a plurality, obtained nonsociological professional association credentials in social service and mental health care fields, while 41 percent acquired State professional credentials as certified and licensed social workers or similarly credentialed clinical and school social workers.

In a separate study, using data from the universe of 12,211 Ph.D. sociologists polled in the 1995 Survey of Doctorate Recipients sponsored by the National Science Foundation's Division of Science Resource Studies, independent researchers Koppel and Dotzler (1998) found that Ph.D. sociologists favor academic over nonacademic jobs by a margin greater than 3:1. Their data, weighted on 36 "best principle job codes," indicate that 45.8 percent of all Ph.D. sociologists employed during the week of April 15, 1995, taught sociology at postsecondary institutions. In contrast, 1 percent of nonacademically employed Ph.D. sociologists coded their work as sociological, while 2.4 percent coded it as psychological and clinically psychological, and 1.8 percent as social work. An additional 1.9 percent classified their work as other health occupations, as distinguished from medical science (nonpracticing); registered nursing, pharmacology, diet, and therapy; and health technology.

Discussion

The information in this chapter is important for examining the current status of human resources and care delivery in mental health, particularly within the context of managed care. Unfortunately, many critical issues are not addressed by these data. Given the increasing demand for cost-effective service, it is critical that evaluations focus on determining the cost-effectiveness of specific treatment and intervention outcomes. This necessary shift of attention away from the process of delivery to outcome will demand analyses of economic and clinical substitutability of mental health professionals. Presently available data do not permit effective examination of these questions.

Other questions cannot be answered about how mental health professionals provide services. Additional information is needed on characteristics of the providers, clientele treated, actual services delivered, sources of referrals, and relationships with other health and social service professionals. This information deficit plagues all mental health professions. Given the severe consequences of psychiatric disability, it is essential that relevant policymakers work together to improve the quality of information currently available on human resources in mental health.

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Appendix A

Sources and Qualifications of Data from the Survey of Mental Health Organizations

The organizational data in chapter 14 were derived from a series of biennial inventories of special mental health organizations and non-Federal general hospitals with psychiatric services in the United States conducted by the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services, with the cooperation and assistance of the State mental health agencies, the National Association of State Mental Health Program Directors, the American Hospital Association, and the National Association of Psychiatric Healthcare Systems. The data were imputed for missing organizations as well as for missing items among organizations that reported.

Prior to 1981–82, three inventories were conducted:

> Inventory of General Hospital Mental Health Services, which was used for non-Federal and Veterans Administration (VA) general hospitals identified as having separate psychiatric services.
>
> Inventory of Mental Health Organizations, which was used for organizations that were not covered in the other two inventories, including psychiatric hospitals (State, county, and private), VA neuropsychiatric hospitals and psychiatric outpatient clinics, psychiatric partial care organizations, and multiservice mental health organizations not elsewhere classified.
>
> Inventory of Comprehensive Federally Funded Community Mental Health Centers (CMHCs), which was used to monitor CMHCs fund under the CMHC Act of 1963 and pertinent amendments. This inventory was discontinued in 1981 when the definitions of organizations changed. All organizations surveyed in the CMHC Inventory were then subsumed under the other two inventories.

The 1986 Inventory of Mental Health Organizations and General Hospital Mental Health Services (IMHO/GHMHS) marked the beginning of a major evolution of the National Institute of Mental Health Inventory. For the prior 18 years, the biennial Inventory of Mental Health Organizations and the Inventory of General Hospital Mental Health Services functioned as companion, 100-percent enumeration surveys designed to collect information on specialty mental health organizations in the United States. They were carried out under separate contracts with separate forms, and in certain years, at different times of the year.

The 1986 IMHO/GHMHS was designed to simplify data collection procedures, reduce response burden, and alleviate many of the issues that had occurred prior to 1986. First, a single contract was awarded to conduct the IMHO/GHMHS. Second, since similarities existed between the questions asked in the previously conducted separate inventories, it was feasible to develop a common core form with three versions—one for specialty mental health organizations, one for general hospitals with separate psychiatric services, and a brief screener form for general hospitals with separate psychiatric services. Third, since the survey was carried out with a common core form, comparable information was obtained from general hospitals at the same time as from other specialty mental health organizations. The data collection protocol instituted in 1986 was also applied in 1988, 1990, 1992, and 1994.

In 1998, the IMHO/GHMHS was replaced by the Survey of Mental Health Organizations and General Hospital Mental Health Services, and Managed Behavioral Health Care Organizations (SMHO). The SMHO introduced several innovations: (1) the use of a brief 100-percent enumeration inventory (postcard form) that was sent to all specialty mental health organizations and non-Federal general hospitals with separate mental health services for the purpose of collecting core data and serving as a sampling frame for a more extensive sample survey; (2) the use of the sample survey form that was sent to a sample of specialty mental health organizations and general hospitals with separate mental health services; and (3) the use of a 100-percent enumeration inventory of managed behavioral health care organizations that provided minimal information on these entities for the first time and to serve as a sampling frame for sample surveys of these organizations in subsequent years.

The 1998 data collection includes two phases. The "Postcard inventory" uses the abbreviated version of past inventory forms that includes the types of organizations, ownership, the number of additions and resident patients at the end of the year, the number of episodes, and number of beds staffed during the reporting year. The second phase uses a sample survey form closely resembling the forms employed in previous inventories, but including more items addressed to managed behavioral health care.

Types of Information Collected

The inventories are typically mailed in January of even-numbered years to obtain information on the previous year. Organizations have the option of reporting on either a calendar or fiscal year basis.

For all years, the inventories include questions on types of services provided (e.g., inpatient, outpatient, and partial care) number of inpatient beds; number of inpatient, outpatient, and partial care additions; and end of year inpatient census, expenditures, and staffing by discipline. Revenues by source were collected only in 1983, 1986, 1988, 1990, 1992, and 1994 and in the sample survey for 1998 data.

Staffing information is collected as of a sample week at the time the inventory is mailed, and types of services and beds are collected as of the beginning of the next year. Thus, in tables where numbers of organizations and beds are shown, data are shown at a point in time, usually January of a particular year. For all other tables, the year refers to either the calendar year or a fiscal year. For all years, information is adjusted to include estimates for organizations that did not report.

Types of Services

Twenty-four-hour care refers to services provided in a 24-hour care setting in a hospital or 24-hour care in a residential treatment or supportive setting.

Less than 24-hour care refers to services provided in less than 24-hour care settings and not overnight.

Types of Organizations

Types of organizations included in this report are defined as follows:

An *outpatient mental health clinic* provides only ambulatory mental health services. A psychiatrist generally assumes the medical responsibility for all patients/clients and/or for direction of the mental health program. Beginning in 1986, the definition was changed so that for an organization to be classified as an outpatient clinic, it must provide only outpatient services. In 1994 and 1998, no differentiation was made between outpatient and partial care services. Any organization that was classified in previous years as either a freestanding psychiatric outpatient clinic, a freestanding partial care organization, or in some cases as a multiservice mental health organization with neither 24-hour inpatient nor residential services is now classified as an organization with less than 24-hour care services.

A *psychiatric hospital* (public or private) primarily provides 24-hour inpatient care to persons with mental illnesses in a hospital setting. It may also provide 24-hour residential care and less than 24-hour care, but these are not requirements. Included in this category would be hospitals under State, county, private for-profit, and private nonprofit auspices.

A *general hospital with separate psychiatric service(s)* is a licensed hospital under government or nongovernment auspices that has established organizationally separate psychiatric services with assigned staff for 24-hour inpatient care, 24-hour residential care, and/or less than 24-hour care (outpatient care or partial hospitalization) to provide diagnosis, evaluation, and/or treatment to persons admitted with a known or suspected psychiatric diagnosis. If 24-hour inpatient care is the separate psychiatric service, beds are set up and staffed specifically for psychiatric patients in a separate ward or unit. These beds may be located in a separate building, wing, ward, or floor, or they may be a specific group of beds physically separated from regular or surgical beds.

VA medical centers are hospitals operated by the Department of Veterans Affairs (formerly the Veterans Administration) and include VA general hospital psychiatric services (including large neuropsychiatric units) and VA psychiatric outpatient clinics.

Federally funded community mental health centers were funded under the Federal Community Mental Health Centers Act of 1963 and the amendments thereto. In the early 1980's, when the Federal Government reverted to funding mental health services through block grants to the States rather than funding them directly, the Federal Government ceased to track these organizations. They are now subsumed in this report primarily under "all other mental health organizations."

A *residential treatment center (RTC) for emotionally disturbed children* must meet all of the following criteria:

- It must provide 24-hour residential services.
- It is an organization, not licensed as a psychiatric hospital, the primary purpose of which is the provision of individually planned programs of mental health treatment services in conjunction with residential care for its patients/clients.
- It has a clinical program within the organization that is directed by a psychiatrist, psychologist, social worker, or psychiatric nurse who has a master's or a doctorate degree.
- It serves children and youth primarily under the age of 18.
- The primary reason for the admission of 50 percent or more of the children and youth is mental illness that can be classified by DSM-IV/ICD-9-CM codes other than codes for mental retardation, drug-related disorders, or alcoholism.

All other mental health organizations includes freestanding psychiatric outpatient clinics, freestanding partial care organizations, and multiservice mental health organizations (i.e., organizations that provide services in both 24-hour and less than 24-hour settings and are not classifiable to other organizations such as psychiatric hospitals, general hospitals, or RTCs). In contrast to previous years, in 1994 and 1998 no distinction was made between outpatient and partial care on the inventory and the survey, and a category of "less than 24 hours and not overnight" was used.

Qualifications of the Data

Several factors affect the comparability of data. As a result of the 1981 shift in the funding of the CMHCs program from categorical to block grants, organizations that previously had been classified as CMHCs were reclassified as multiservice mental health organizations, freestanding psychiatric outpatient clinics, or separate psychiatric units of non-Federal general hospitals, depending on the types of services they directly operated and controlled.

Prior to 1983–84, any organization (1) not classified either as a psychiatric hospital, general hospital with separate psychiatric services, or residential treatment center for emotionally disturbed children and (2) that offered either inpatient care or residential treatment care and outpatient or partial care was classified as a multiservice mental health organization. In 1983–84, this definition was broadened to include organizations that offered any two different services and were not classifiable as any of the organizations noted (1) above. The provision of inpatient or residential treatment care was no longer a prerequisite. As a result, many organizations classified in 1981–82 and earlier with psychiatric outpatient clinics were classified in 1983–84 as multiservice mental health organizations. For partial care services, the definition was broadened to include rehabilitation, habitation, and education programs that had previously been excluded. This resulted in a sharp increase in the number and volume of partial care programs.

Other revisions occurred in the definition for psychiatric outpatient clinics. In 1983–84, an organization could be classified as a freestanding psychiatric outpatient clinic if partial care was provided as well as outpatient services. In 1986 through 1992, an organization had to provide outpatient services only to be so classified. In 1994 and 1998, both partial care and outpatient treatment were combined with multiservice to form the "other mental health organizations" category.

In summary, the net effect of the revisions has been to phase out CMHCs as a category after 1981–82; to increase the number of multiservice mental health organizations from 1981 to 1986; to increase the number of psychiatric outpatient clinics in 1981–82, but decrease the number in 1983–84, 1986, 1990, and 1992; and to increase the number of partial care services in 1983–84. These changes should be noted when interyear comparisons for the affected organizations and service types are made.

The increase in the number of general hospitals with separate psychiatric services was partially due to a more concerted effort to identify these organizations. Forms had been sent only to those hospitals previously identified as having a separate psychiatric service. Beginning in 1980–81, a screener form was sent to general hospitals not previously identified as providing a separate psychiatric service to determine if they had such a service.

The large increase in the number of RTCs between 1983 and 1998 was attributed to the identification of previously unknown RTCs from lists obtained in 1986.

Since 1981–82 data were not available for VA medical centers and non-Federal general hospitals, 1980–81 data were used where possible. For VA medical centers, 1980–81 data were available only on bed and patient movement variables for inpatient services. The effect on the comparability of the data resulting from the substitution of data for the previous year is unknown, but it is believed to be small. However, headnotes and footnotes indicate tables that have excluded VA data for all years and tables where data substitutions have been made.

Appendix B

Sources and Qualifications of the Data: *1997 Client/Patient Sample Survey*

Survey Design

Scope of the Survey

The survey was conducted during 1997 and included all types of specialty mental health care organizations located in the 50 States, the District of Columbia, and the Territories. The types of organizations included in the survey were State and county mental hospitals, private psychiatric hospitals, multiservice mental health organizations, Department of Veterans Affairs medical centers, non-Federal general hospitals with separate psychiatric services, residential treatment centers for emotionally disturbed children, freestanding outpatient mental health clinics, and freestanding partial care organizations. The survey covered the inpatient, residential, and less than 24-hour care programs operated by these types of organizations during a 1-month period in 1997.

The target population included two groups: (1) all persons newly admitted, readmitted, or transferred into the program during a specified survey month who were not already residents/on the rolls of the program on the first day of the survey month, referred to as the *admission population,* and (2) all persons who were admitted to the program before the first day of the specified survey month and who received service from the program during the survey month, referred to as the *under care population*. An oversample of children and youth under age 18 was included in the sample design so that reliable national estimates could be generated for this specific population subgroup. Separate survey questionnaires were designed to collect data from four groups—adult admissions, adults under care, child admissions, and children under care, from within the inpatient, residential, and less than 24-hour care programs of the mental health organizations identified above.

The survey was conducted by the Survey and Analysis Branch (SAB), Division of State and Community Systems Development (DSCSD), Center for Mental Health Services (CMHS), Substance Abuse and Mental Health Services Administration (SAMHSA), in cooperation with State mental health agencies.

Sampling Frame

The sampling frame for the survey was the *1994 Inventory of Mental Health Organizations and General Hospital Mental Health Services (IMHO/GHMHS)*. Unique combinations of the eight organization types and three program types, identified earlier, defined the 14 first-stage primary sampling strata (Table B1). The term "organization/program," used henceforth, refers to these combinations. The measure of size used to stratify the programs was the number of persons under care at the beginning of 1994 plus the number of admissions during 1994.

Sample Design: First-Stage Selection—Mental Health Organizations and Programs

The sample was based on a two-stage cluster design for all primary strata, with the exception of primary strata 2, 9, and 10 (see Table B1). For these strata, the sample design was a single-stage design with all programs selected with certainty. Actual sampling was carried out in several steps. First, to ensure geographic representation of the sample, programs were arranged separately by region, by State within region, and by city within State. A systematic sample of programs was then selected for each cell with a random start in the first sampling interval. This sampling procedure was carried out separately for organizations that operated one or two program types and those that operated three program types (i.e., inpatient, residential, and less than 24-hour). This was done to reduce the burden on organizations so that no more than two programs were selected from any given sampled organization.

For all primary strata, except Department of Veterans Affairs medical centers (strata 9 and 10), which are exclusively for adults, most organizations/programs treated both adults and children. A

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Table B1. Number of organizations/programs in the 1997 CPSS by primary stratum

Stratum	Type of Organization	Program	Over-sampling factor	Number of programs sampled	Number of programs out-of-scope	Number of programs in scope	Number of program respon-dents
1	St/Co mental hospital	IP	3	158	10	148	130
2	St/Co mental hospital	OP	1	75	19	56	44
3	Priv. psych. hospital	IP	3	193	26	167	91
4	Priv. psych. hospital	OP	3	176	28	148	66
5	Res. treatment center	RC	1	159	8	151	86
6	Res. treatment center	OP	3	180	15	165	93
7	Non-Fed. general hospital	IP	3	166	7	159	97
8	Non-Fed. general hospital	OP	3	252	19	233	139
9	VA medical center	IP	NA	130	12	118	77
10	VA medical center	OP	NA	149	11	138	85
11	Hospital/Multiservice	RC	3	165	18	147	108
12	Freestanding outpatient clinics/ partial care org.	OP	3	420	29	391	232
13	Multiservice mental health organization	IP	1	22	3	19	13
14	Multiservice mental health organization	OP	3	492	23	469	338
Total				2,737	228	2,509	1,599

IP = Inpatient; RC = Residential; OP = Less than 24-hour
NA = not applicable

small number of organizations/programs either treated adults only or treated children only.

The total number of programs sampled was 2,737, of which 228 were not within the scope of the survey, that is, "out-of-scope" (e.g., program closed). The overall survey response rate was 64 percent of the target sample. The final column in table B1 presents the number of organizations/programs that responded to the survey by primary stratum.

Sample Design: Second-Stage Selection—Clients/Patients

For client/patient selection, separate listing booklets were used to establish the sampling frame for each of the four groups (adult admission, adult under care, child admission, and child under care) within each type of program (inpatient, residential, and less than 24-hour). Using separate booklets for adults and children under age 18, sample programs were asked to list the case numbers for all persons newly admitted, readmitted, or transferred into the program during the survey month who were not already resident/on the rolls of the program on the first day of the survey month. Sample programs were also asked to list in separate booklets for adults and children under age 18 the case numbers for all persons who were admitted to the program before the first day of the survey month and who received service from the program during the survey month. Programs were asked to list case numbers only once in the booklets, and to include all geographic locations of the program. Programs had the option of generating computerized client/patient listings in place of manually completing the listing booklets. Once the listings were completed, programs were asked to call a toll-free telephone number to speak with a survey specialist. Using a specially designed computer program to generate random numbers for the survey and using information obtained directly from the program, the specialist selected "online" random numbers that corresponded to completed line numbers in the program's listing booklets (or computer-generated listings). The specialist informed the program as to which line numbers were selected. The case numbers found on these line numbers identified for the program which persons were to be sampled.

To reduce the burden on an organization/program, the total number of questionnaires that were to be completed on persons sampled from all four groups was limited to a predetermined number based on the size of the program. Smaller programs were requested to complete a maximum of 8 ques-

Table B2. Number of clients/patients in the 1997 CPSS by primary stratum

Stratum	Number of clients/patients										
	Total Sampled	Out-of-scope	AA sampled	AU sampled	CA sampled	CU sampled	AA respondents	AU respondents	CA respondents	CU respondents	Total respondents
1	2,129	5	870	887	185	187	872	887	185	150	2,094
2	723	17	265	298	80	80	261	303	80	70	714
3	1,410	9	337	316	352	405	338	316	354	329	1,337
4	928	4	232	227	221	248	232	229	221	196	878
5	1,017	13	12	31	361	613	10	31	363	571	975
6	1,306	36	156	152	431	567	156	152	431	480	1,219
7	1,456	0	633	573	78	172	633	574	79	71	1,357
8	1,933	2	630	612	315	376	634	609	320	302	1,865
9	1,261	16	602	545	0	114	602	546	0	0	1,148
10	1,354	13	659	590	0	105	662	588	0	0	1,250
11	1,329	20	380	692	81	176	384	692	81	126	1,283
12	3,255	33	811	859	762	823	815	860	760	719	3,154
13	198	0	88	89	13	8	88	90	13	7	198
14	5,116	37	1,323	1,433	1,150	1,210	1,324	1,437	1,152	1,003	4,916
Total	23,415	205	6,998	7,304	4,029	5,084	7,011	7,314	4,039	4,024	22,388

AA = Adult admission; AU = Adult under care; CA = Child admission; CU = Child under care

tionnaires; larger programs a maximum of 16 questionnaires.

Table B2 presents the number of persons sampled and the number of respondents in each of the four groups by primary stratum.

For strata 1, 3, 4, 6, 7, 8, 11, 12, and 14, children were oversampled at a rate of 3 to 1 compared to adults. For strata 2, 5, and 13, children were sampled at the same rate as adults. For strata 9 and 10, which refer to the Department of Veterans Affairs medical centers, children were not sampled (i.e., not applicable).

Data Collection and Instruments

Data collection was accomplished primarily by mail, with telephone followup to participating programs. Initial letters were mailed to the administrators of sample organizations in March 1997 to inform them of the survey, its purpose, anticipated levels of effort that would be required, and the program(s) in their organization that had been selected for the survey. A followup call was made to the administrators to discuss the survey further, answer questions, and request participation. Numerous attempts were made by certified mail and telephone callbacks to elicit survey participation. Prior to the survey month, a packet of survey materials was sent to the designated person for each program that had agreed to participate. The packets included all necessary survey forms (color-coded listing booklets and corresponding questionnaires) and instructional material (detailed instructions for completing the survey forms, procedures for selecting the sample of persons, information on obtaining survey assistance, and instructions on returning the completed survey forms in the postage-paid return envelopes provided in each packet).

The data collection forms used for the survey focused on the sociodemographic, clinical, and service use characteristics of persons. Inpatient and residential sample programs used the same color-coded listing booklets and questionnaires. These forms were similar in content to the forms used for less than 24-hour care programs with slight variations in vocabulary to conform to different program usage. Different colored forms were used to differentiate among the four groups: adult admissions, adults under care, child admissions, and children under care, and between inpatient/residential and less than 24-hour care programs.

Estimation

The sample for this survey was weighted to produce unbiased national estimates about the number and characteristics of persons served in the inpatient, residential, and less than 24-hour care programs of specialty mental health organizations in the United States. Sample counts were inflated to national estimates in accord with each stage of the sample design and nonresponse patterns. Hence, estimates reported for admissions are weighted to 1-year totals; those for the under care population to 1-day totals.

Limitations of the Design

Nonresponse

For this survey, nonresponse errors could exist in three ways: (1) failure to obtain participation from some of the programs selected into the sample; (2) failure to obtain data for some of the persons selected into the sample; and (3) failure to obtain complete data for some sampled persons.

To minimize bias that might exist due to nonresponse, the information reported by responding organizations was adjusted to compensate for program and person nonresponse. The first-stage adjustment factor was the ratio of the number of sampled programs (after removing the out-of-scope programs) to the number of programs that responded. This adjustment factor was calculated and applied separately to each stratum for each organization by program type combination. The second-stage adjustment factor was the ratio of the number of sampled persons admitted or persons under care to the number of corresponding person respondents, calculated and applied separately for each of the four groups in each program respondent.

Missing items on the survey questionnaires were imputed using a sequential hot deck procedure, as follows: Records were sorted on core sets of variables, such as organization and program type, client/patient type, gender, age, diagnosis, and region, to determine the imputation classes. The value of the variable from the previous completed record in this ordered file was substituted for the unknown value. After the sequential hot deck procedure was performed on a given variable, a determination was made on how many times a given donor was used in the process. If any donor was used five or more times during imputation of a particular variable, a within-class random hot deck procedure was performed instead of a sequential hot deck procedure to impute that variable. That is, records were sorted on core sets of variables to determine the imputation classes. Then an observed value of the variable was selected at random within that imputation class to substitute for the unknown value.

Reliability of Estimates

Background

Because estimates presented in this report are based on sample data, they are likely to differ from figures that would have been obtained from a complete enumeration of the universe of specialty mental health organizations using the same instruments. Results are subject to both sampling and nonsampling errors. Nonsampling errors include biases due to inaccurate reporting, processing, and measurement, as well as errors due to nonresponse and incomplete reporting. These types of errors cannot be measured readily. However, to the extent feasible, each error has been minimized through the procedures used for data collection, editing, quality control, and nonresponse adjustment.

The sampling error (standard error) of a statistic is inversely proportional to the square root of the number of observations in the sample. Thus, as the sample size increases, the standard error decreases. The standard error measures the variability that occurs by chance, because only a sample rather than the entire universe is surveyed. The chances are about two out of three that an estimate from the sample differs by less than one standard error from the value that would be obtained from a complete enumeration. The chances are about 95 out of 100 that the difference is less than twice the standard error, and about 99 out of 100 that it is less than three times as large.

In this chapter, statistical inference is based on the construction of 5-percent confidence intervals for estimates (0.05 level of significance). All statements of comparison in the text relating to differences such as "higher than" and "less than" indicate that the differences are statistically significant at the 0.05 level or better. Terms such as "similar to" or "no difference" mean that a statistical difference does not exist between the estimates being compared. Lack of comment on the difference between any two estimates does not imply that a test was completed and there was a finding of no significance.

Calculation of standard errors

Standard errors were calculated on a personal computer for a broad range of totals and subtotals within age, gender, and race subclasses through the use of SUDAAN Survey Data Analysis Software developed at the Research Triangle Institute by B.V. Shah. This procedures computes estimated standard errors through the use of Taylor series approximation. As applied to data from the present survey, variance estimates for totals and subtotals were calculated for each stratum and then summed across strata to derive standard errors for characteristics of interest. The variance estimate for each stratum includes both the between-program and the within-program components of variance, with corrections for finite populations applied at both sampling stages.

Relative Standard Errors of Totals and Subtotal Estimates, Percentages, and Rates

The relative standard error of a total or subtotal estimate, percentage, or rate for a characteristic of interest is obtained by dividing the standard error of the estimate by the estimate itself and is expressed as a percentage of the estimate.

Relative Standard Errors of Differences Between Two Statistics

The standard error of a difference is approximately the square root of the sum of the squares of each standard error considered separately. The relative standard error of a difference is the standard error of a difference divided by the difference.

Relative Standard Errors of Statistical Sums

The standard error of a sum of a number of independent estimates is the square root of the sum of the squares of the standard errors of the separate estimates. The relative standard error of the sum is the standard error divided by the sum.

Table B3 presents standard errors and percent relative standard errors for the estimated numbers, percentages, and rates per 100,000 U.S. civilian population of selected major characteristics for persons under care and admitted to inpatient, residential, and less than 24-hour care programs, for each type of organization surveyed. The statistics presented in table B3 can be used to show the relative sizes of the characteristics detailed in tables 1 through 19 of Chapter 15. The reader is cautioned that if a relative standard error (i.e., the standard error of an estimate, percentage, or rate divided by the estimate, percentage, or rate itself, expressed as a percent) is 50 percent or higher, the estimate, percentage, or rate is not considered reliable and should not be used.

Table B3. Standard errors and percent relative standard errors of numbers, percentages. and rates per 100,000 population for selected characteristics of persons under care and persons admitted to the inpatient, residential, and less than 24-hour care programs of specialty mental health organizations, United States, 1997

	Under Care						**Admissions**					
	Number		**Percent**		**Rate**		**Number**		**Percent**		**Rate**	
	SE	**% RSE**	**SE**	**% RSE**	**SE**	**% RSE**	**SE**	**% RSE**	**SE**	**% RSE**	**SE**	**% RSE**
Inpatient Programs												
Total Inpatient	7,855	6.8	0.0	0.0	3.0	6.8	66,005	3.2	0.0	0.0	24.8	3.2
Male	5,448	7.6	1.6	2.5	4.2	7.6	49,354	4.5	1.4	2.5	37.3	4.4
Female	3,238	7.3	1.6	4.1	2.3	7.2	37,021	3.9	1.4	3.0	27.0	3.9
Black/African Am.	2,134	8.0	1.6	6.9	12.2	7.1	33,734	8.9	1.4	7.7	185.8	7.7
White	6,626	8.5	2.0	3.0	6.9	8.5	57,751	4.0	1.7	2.4	58.2	3.9
Hispanic/Latino	1,196	12.3	1.0	12.4	6.7	9.9	21,039	11.7	1.0	11.8	108.9	8.7
Under 18	1,776	14.3	1.2	10.9	2.3	13.1	27,273	9.5	1.3	9.4	25.5	6.2
25–44	3,301	6.7	1.9	4.4	3.8	6.3	46,120	4.8	1.6	3.3	51.8	4.5
45–64	2,439	7.8	1.3	4.7	4.2	7.3	22,421	5.7	1.0	5.5	32.3	4.6
Affective disorders	2,357	8.0	1.2	4.7	NA	NA	36,773	4.6	1.7	4.3	NA	NA
Schizophrenia	4,444	8.4	1.8	4.0	NA	NA	30,392	7.5	1.2	6.1	NA	NA
Atten/cond/develop	675	22.8	0.5	20.0	NA	NA	9,005	19.8	0.4	19.9	NA	NA
State/county	3,505	6.5	3.2	7.0	1.3	6.5	14,812	7.8	0.7	7.7	5.6	7.8
Male	2,866	7.6	2.1	3.0	2.2	7.6	10,223	8.9	1.8	3.0	7.9	8.9
Female	1,420	8.8	2.1	7.0	1.0	8.2	6,237	8.3	1.8	4.7	4.4	8.0
Black/African Am.	1,619	11.5	2.5	9.6	9.2	10.2	6,079	13.1	2.4	9.8	35.8	12.2
White	2,486	7.5	2.7	4.4	2.6	7.4	10,924	8.6	2.5	3.7	11.3	8.6
Hispanic/Latino	1,001	18.2	1.6	15.8	5.6	14.7	2,362	16.2	1.2	15.9	12.8	12.7
Under 18	487	18.3	1.0	20.3	0.5	13.3	3,275	16.4	1.6	15.6	3.3	11.4
25–44	2,295	9.1	2.1	4.4	2.6	8.6	10,232	9.4	2.1	3.6	11.9	9.1
45–64	1,649	9.8	2.2	7.0	2.8	9.1	4,068	10.7	1.6	8.0	6.7	9.8
Affective disorders	725	10.5	1.2	9.2	NA	NA	4,874	10.9	1.9	7.9	NA	NA
Schizophrenia	2,985	8.7	2.4	3.8	NA	NA	4,813	8.8	2.1	7.2	NA	NA
Atten/cond/develop	154	18.4	0.3	20.2	NA	NA	1,341	21.5	0.7	20.9	NA	NA
Private	1,734	9.9	1.6	10.7	0.7	9.9	22,289	4.5	1.1	4.6	8.4	4.5
Male	822	9.6	4.8	9.7	0.6	9.4	15,962	6.1	2.2	4.2	11.9	5.9
Female	1,500	16.9	4.8	9.4	1.1	16.8	15,237	6.4	2.2	4.6	11.0	6.3
Black/African Am.	509	16.0	3.0	16.2	2.7	13.3	11,414	14.2	2.2	13.4	59.5	11.8
White	1,646	13.2	3.9	5.5	1.6	12.8	21,327	6.4	3.3	4.9	20.6	5.9
Hispanic/Latino	383	24.8	2.3	25.7	2.2	20.5	14,592	19.2	2.8	18.2	84.5	16.1
Under 18	922	15.5	3.7	10.8	1.3	14.7	12,843	8.6	2.7	9.1	15.8	7.3
25–44	861	14.5	4.6	13.4	0.9	12.8	18,330	9.4	2.7	7.0	18.7	8.0
45–64	564	18.3	2.2	12.4	0.9	16.2	10,629	14.2	2.0	13.5	13.2	9.7
Affective disorders	977	13.6	3.3	8.0	NA	NA	14,785	6.2	2.3	4.9	NA	NA
Schizophrenia	732	22.2	4.0	21.1	NA	NA	9,798	15.5	1.8	14.0	NA	NA
Atten/cond/develop	547	37.5	2.6	31.2	NA	NA	4,291	21.1	0.9	21.1	NA	NA
Non-Fed General Hosp	2,319	8.0	2.2	8.8	0.9	8.0	43,298	4.2	1.6	3.2	16.3	4.2
Male	1,484	10.9	2.6	5.6	1.1	10.8	35,166	6.8	2.3	4.6	26.2	6.6
Female	1,262	8.2	2.6	5.0	0.9	8.0	28,418	5.5	2.3	4.5	20.8	5.5
Black/African Am.	961	15.4	2.7	12.6	5.2	13.2	22,528	12.4	2.1	12.0	112.6	9.8
White	1,706	8.3	3.1	4.3	1.7	8.1	44,850	5.9	2.6	3.6	45.0	5.8
Hispanic/Latino	486	26.1	1.5	22.8	2.6	20.2	12,279	18.7	1.2	18.7	55.7	12.3
Under 18	604	26.0	2.0	25.1	0.5	16.0	19,872	22.9	1.9	23.0	16.6	13.3
25–44	1,618	12.0	3.4	7.2	1.8	11.2	35,808	6.9	2.5	4.9	40.0	6.4
45–64	728	11.9	2.1	9.9	1.2	10.5	17,035	8.5	1.6	8.1	24.5	6.8
Affective disorders	1,092	9.6	3.0	7.7	NA	NA	32,463	7.1	2.8	6.5	NA	NA
Schizophrenia	1,258	14.7	3.0	10.1	NA	NA	23,973	10.7	2.1	9.5	NA	NA
Atten/cond/develop	115	43.4	0.4	41.9	NA	NA	7,280	49.4	0.7	49.4	NA	NA

Table B3. Standard errors and percent relative standard errors of numbers, percentages, and rates per 100,000 population for selected characteristics of persons under care and persons admitted to the inpatient, residential, and less than 24-hour care programs of specialty mental health organizations, United States, 1997 (continued)

	Under Care						Admissions					
	Number		Percent		Rate		Number		Percent		Rate	
	SE	% RSE	SE	% RSE	SE	% RSE	SE	% RSE	SE	% RSE	SE	% RSE
							Inpatient Programs (continued)					
VA Med Centers	1,146	17.2	1.0	17.6	0.4	17.2	8,078	7.9	0.4	8.2	3.0	7.9
Male	1,073	17.0	1.2	1.2	0.8	17.0	7,750	8.2	1.5	1.6	6.0	8.2
Female	108	31.3	1.2	22.9	0.1	27.3	1,899	23.4	1.5	22.3	0.9	17.[illegible]
Black/African Am.	468	21.6	4.0	12.4	3.0	20.7	4,924	14.5	3.6	10.8	30.1	13.5
White	720	18.0	3.9	6.5	0.8	17.8	5,322	8.7	3.4	5.7	5.6	8.6
Hispanic/Latino	131	31.6	1.6	25.5	0.8	27.1	1,510	25.5	1.4	23.6	8.2	20.0
Under 18	—	—	—	—	—	—	—	—	—	—	—	—
25–44	532	25.1	4.3	13.6	0.6	24.7	4,003	10.2	2.9	7.6	4.8	10.0
45–64	571	17.1	4.8	9.6	1.0	17.1	5,785	11.0	3.1	6.0	10.4	10.9
Affective disorders	259	18.9	2.1	10.0	NA	NA	2,154	12.6	2.0	12.2	NA	NA
Schizophrenia	649	24.3	4.6	11.5	NA	NA	3,430	13.8	2.5	10.1	NA	NA
Atten/cond/develop	—	—	—	—	—	—	—	—	—	—	—	—
							Residential Programs					
Total Residential	8,066	9.7	0.0	0.0	3.0	9.7	20,615	12.0	0.0	0.0	7.7	12.0
Male	4,888	9.2	2.4	3.7	3.7	9.2	16,105	14.8	3.6	5.6	12.3	14.7
Female	4,015	13.4	2.4	6.6	2.9	13.1	8,009	12.8	3.6	9.7	5.5	12.0
Black/African Am.	3,176	14.7	2.6	9.8	18.4	13.4	5,427	16.1	2.5	12.9	29.6	13.8
White	5,175	10.0	3.0	4.9	5.3	9.9	16,622	14.1	3.4	5.0	17.0	13.9
Hispanic/Latino	1,610	20.7	1.5	16.0	9.8	18.1	3,239	19.8	1.7	17.8	17.3	16.3
Under 18	2,967	9.0	4.3	10.9	3.9	8.2	10,456	15.9	6.0	15.6	13.3	14.0
25–44	4,416	17.5	3.2	10.5	5.2	17.1	12,279	20.0	4.5	12.6	14.3	19.3
45–64	2,698	15.9	2.1	10.1	4.6	15.0	4,927	19.7	2.2	14.9	7.8	17.1
Affective disorders	2,389	16.0	2.2	12.3	NA	NA	5,880	14.2	2.9	11.9	NA	NA
Schizophrenia	4,256	14.6	3.5	10.1	NA	NA	4,154	13.8	2.7	15.4	NA	NA
Atten/cond/develop	1,444	10.6	2.0	12.4	NA	NA	2,900	14.6	1.9	16.5	NA	NA
RTCs	2,662	9.6	3.7	11.2	1.0	9.6	6,030	13.9	3.9	15.5	2.3	13.9
Male	1,998	10.2	3.2	4.5	1.5	9.7	4,598	16.5	4.8	7.4	3.5	16.1
Female	1,233	15.4	3.2	11.0	0.8	13.5	2,798	18.0	4.8	13.2	1.8	15.8
Black/African Am.	1,343	15.7	3.3	10.5	7.8	14.3	2,790	22.5	4.4	15.5	16.4	20.9
White	1,674	11.0	3.5	6.4	1.7	10.6	3,862	16.3	5.0	9.2	3.9	15.7
Hispanic/Latino	575	19.7	1.9	18.3	3.3	16.2	1,378	25.6	3.0	24.1	8.3	22.3
Under 18	2,378	9.0	2.5	2.6	3.4	9.0	5,920	14.1	2.7	2.8	8.5	14.0
25–44	210	58.9	0.7	55.8	0.2	37.4	395	92.9	0.9	91.2	0.4	85.4
45–64	69	73.7	0.2	74.8	0.1	56.8	—	—	—	—	—	—
Affective disorders	801	16.9	2.4	13.8	NA	NA	1,714	23.3	3.7	22.0	NA	NA
Schizophrenia	909	55.3	3.0	50.6	NA	NA	267	47.4	0.6	49.2	NA	NA
Atten/cond/develop	1,222	11.3	3.1	7.9	NA	NA	2,235	15.0	4.5	13.1	NA	NA
All Other Residential	7,614	13.8	3.7	5.6	2.9	13.8	19,713	15.4	3.9	5.2	7.4	15.4
Male	4,461	13.4	3.0	5.0	3.4	13.4	15,435	19.1	4.5	7.1	11.8	18.9
Female	3,821	17.4	3.0	7.6	2.8	17.2	7,505	15.9	4.5	12.2	5.2	15.1
Black/African Am.	2,879	22.2	3.5	14.9	16.6	20.2	4,655	21.8	2.9	17.4	24.6	18.1
White	4,896	13.4	4.3	6.5	5.1	13.3	16,167	17.2	4.0	5.5	16.6	17.0
Hispanic/Latino	1,504	30.8	2.1	23.3	9.2	27.3	2,931	26.6	2.0	23.6	15.2	20.0
Under 18	1,774	26.7	3.4	28.6	1.9	20.4	8,619	36.0	6.5	34.7	10.3	29.9
25–44	4,411	17.7	3.6	8.0	5.2	17.3	12,272	20.2	5.3	11.1	14.3	19.5
45–64	2,698	16.0	2.6	8.6	4.6	15.1	4,927	19.7	2.8	14.5	7.8	17.1
Affective disorders	2,251	22.0	3.1	16.8	NA	NA	5,624	16.5	3.7	14.0	NA	NA
Schizophrenia	4,158	15.1	5.2	10.4	NA	NA	4,145	14.1	4.0	17.3	NA	NA
Atten/cond/develop	769	28.0	1.5	29.7	NA	NA	1,848	36.9	1.5	37.4	NA	NA

Table B3. Standard errors and percent relative standard errors of numbers, percentages, and rates per 100,000 population for selected characteristics of persons under care and persons admitted to the inpatient, residential, and less than 24-hour care programs of specialty mental health organizations, United States, 1997 (continued)

	Under Care						**Admissions**					
	Number		**Percent**		**Rate**		**Number**		**Percent**		**Rate**	
	SE	**% RSE**	**SE**	**% RSE**	**SE**	**% RSE**	**SE**	**% RSE**	**SE**	**% RSE**	**SE**	**% RSE**
Less Than 24-Hour Programs												
Total Less Than 24-Hour	62,504	2.9	0.0	0.0	23.5	2.9	105,956	3.2	0.0	0.0	39.8	3.2
Male	38,653	3.5	0.9	1.8	29.5	3.6	60,490	3.7	1.0	2.1	46.1	3.6
Female	35,662	3.4	0.9	1.9	25.6	3.3	65,174	3.9	1.0	2.0	47.1	3.8
Black/African Am.	26,059	6.2	1.0	5.4	141.6	5.4	39,802	7.1	1.0	6.2	220.2	6.2
White	48,330	3.3	1.3	1.9	48.2	3.2	83,563	3.6	1.3	1.8	83.4	3.5
Hispanic/Latino	20,493	8.7	0.9	8.0	124.9	7.7	28,965	8.6	0.8	7.9	173.9	7.5
Under 18	23,533	4.6	1.0	4.0	30.4	4.1	44,602	4.6	1.1	3.8	57.4	4.1
25–44	32,861	4.0	1.0	2.6	36.5	3.7	58,352	4.3	1.0	2.4	66.6	4.1
45–64	26,103	4.6	0.9	3.4	42.7	4.2	33,300	6.2	0.8	5.1	53.6	5.5
Affective disorders	29,540	4.3	1.0	3.0	NA	NA	40,256	4.4	0.9	3.2	NA	NA
Schizophrenia	25,648	5.5	1.0	4.5	NA	NA	29,443	9.2	0.8	8.4	NA	NA
Atten/cond/develop	13,325	5.9	0.6	5.5	NA	NA	20,741	6.0	0.6	5.4	NA	NA
State/country	9,910	23.7	0.5	23.4	3.7	23.7	7,587	22.1	0.2	22.1	2.9	22.1
Male	5,737	27.5	3.4	6.8	4.4	27.4	5,102	26.9	5.5	10.0	3.9	26.9
Female	4,490	21.4	3.4	6.8	3.2	21.1	3,339	21.7	5.5	12.3	2.4	21.0
Black/African Am.	5,733	49.4	10.6	38.4	35.5	48.5	2,822	38.9	6.8	32.2	17.0	37.0
White	3,834	21.3	11.2	26.0	3.8	20.7	5,590	26.3	8.0	12.9	5.7	25.9
Hispanic/Latino	6,600	55.1	11.7	40.8	44.7	53.9	1,123	27.0	3.1	25.3	6.9	24.0
Under 18	1,779	38.2	4.0	36.4	2.2	32.5	1,570	25.9	4.9	27.8	1.7	19.9
25–44	4,111	25.6	4.7	12.1	4.8	24.7	2,764	20.7	4.1	10.5	3.1	19.0
45–64	4,257	27.7	4.0	10.8	7.3	26.2	3,135	35.5	4.8	18.7	5.4	33.9
Affective disorders	3,445	25.8	3.7	11.6	NA	NA	2,057	21.9	4.5	16.5	NA	NA
Schizophrenia	5,410	32.3	6.6	16.4	NA	NA	1,457	21.2	3.9	19.2	NA	NA
Atten/cond/develop	749	37.5	1.6	34.2	NA	NA	710	27.8	2.2	29.6	NA	NA
Private	10,896	20.1	0.5	19.8	4.1	20.1	26,789	12.8	0.8	12.4	10.1	12.8
Male	5,799	22.2	3.9	8.1	4.4	22.0	12,849	13.7	3.5	7.9	9.9	13.6
Female	5,879	20.9	3.9	7.5	4.3	20.9	17,753	15.4	3.5	6.4	12.7	15.1
Black/African Am.	2,326	31.1	2.8	20.0	13.6	29.1	8,037	33.8	3.6	32.0	46.2	30.7
White	6,333	20.4	5.4	7.2	8.6	20.3	25,220	14.6	3.9	4.7	25.6	14.4
Hispanic/Latino	2,720	49.3	4.4	43.5	17.8	46.8	2,783	29.1	1.4	30.6	14.7	22.2
Under 18	4,770	29.3	6.2	20.6	6.7	28.5	13,554	17.6	4.2	11.4	18.4	16.6
25–44	3,944	21.9	4.6	13.9	4.6	21.1	12,898	16.1	3.1	8.0	14.4	14.9
45–64	3,704	28.2	4.2	17.4	6.3	26.4	5,125	17.7	2.4	17.3	7.2	13.8
Affective disorders	4,811	24.8	3.8	10.5	NA	NA	13,170	15.7	3.9	9.7	NA	NA
Schizophrenia	2,094	31.8	3.4	28.2	NA	NA	2,461	32.6	1.2	33.8	NA	NA
Atten/cond/develop	1,300	25.9	2.1	22.6	NA	NA	5,680	28.1	2.3	23.8	NA	NA
Non-Fed General Hosp	27,159	9.0	1.2	8.2	10.2	9.0	45,037	7.5	1.2	6.8	16.9	7.5
Male	14,324	11.0	2.4	5.5	10.7	10.6	22,570	8.6	2.0	4.6	16.9	8.3
Female	16,308	9.6	2.4	4.2	11.9	9.5	28,606	8.6	2.0	3.6	20.7	8.5
Black/African Am.	9,261	19.6	2.6	16.5	50.1	17.3	15,387	17.9	2.3	15.8	81.5	15.1
White	19,930	10.2	4.1	6.3	20.2	10.0	33,843	8.2	3.2	4.6	34.2	8.0
Hispanic/Latino	11,680	21.2	3.3	18.2	73.1	19.2	17,621	20.1	2.5	17.3	109.4	18.0
Under 18	11,185	14.9	3.2	12.6	13.9	12.9	26,464	16.1	3.5	12.6	33.4	14.1
25–44	11,878	11.9	2.6	7.9	13.7	11.4	22,636	9.9	2.4	6.3	25.6	9.3
45–64	10,698	13.7	2.4	9.3	18.0	12.6	13,538	13.0	1.9	11.0	21.6	11.4
Affective disorders	13,991	11.5	3.0	7.4	NA	NA	22,070	9.7	2.4	6.3	NA	NA
Schizophrenia	7,935	18.1	2.1	14.3	NA	NA	8,108	13.8	1.2	12.6	NA	NA
Atten/cond/develop	6,124	19.7	1.9	18.2	NA	NA	11,095	18.9	1.6	15.9	NA	NA

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Table B3. Standard errors and percent relative standard errors of numbers, percentages, and rates per 100,000 population for selected characteristics of persons under care and persons admitted to the inpatient, residential, and less than 24-hour care programs of specialty mental health organizations, United States, 1997 (continued)

	Under Care						Admissions					
	Number		Percent		Rate		Number		Percent		Rate	
	SE	% RSE	SE	% RSE	SE	% RSE	SE	% RSE	SE	% RSE	SE	% RSE
Less Than 24-Hour Programs (continued)												
VA Med Centers	18,638	12.5	0.8	11.9	7.0	12.5	14,789	10.9	0.4	10.9	5.6	10.9
Male	17,450	12.5	1.2	1.3	13.5	12.5	14,222	11.4	1.6	1.7	11.0	11.4
Female	2,217	22.1	1.2	18.1	1.3	17.8	2,167	19.3	1.6	18.8	1.2	14.2
Black/African Am.	6,549	18.7	2.7	11.5	38.2	16.6	4,129	17.7	2.4	14.2	22.8	14.9
White	12,806	12.9	3.0	4.6	13.5	12.9	10,969	11.0	2.8	3.8	11.5	11.0
Hispanic/Latino	2,343	22.3	1.5	20.9	13.0	17.9	2,072	22.8	1.5	21.9	10.6	17.0
Under 18	—	—	—	—	—	—	—	—	—	—	—	—
25–44	5,919	15.6	2.6	10.4	6.7	14.7	5,357	11.7	2.6	7.7	6.2	11.2
45–64	10,248	12.9	3.3	6.2	18.6	12.9	9,220	14.5	3.9	8.3	16.3	14.1
Affective disorders	8,381	18.6	4.2	14.0	NA	NA	4,940	13.6	2.2	8.1	NA	NA
Schizophrenia	5,100	18.7	2.6	14.5	NA	NA	2,682	17.7	1.6	14.3	NA	NA
Atten/cond/develop	—	—	—	—	—	—	—	—	—	—	—	—
Multiservice	34,210	3.9	1.4	3.3	12.9	3.9	71,337	5.2	1.6	3.9	26.8	5.2
Male	20,276	4.9	1.4	3.0	15.4	4.8	41,708	6.3	1.8	3.8	31.9	6.2
Female	22,012	4.7	1.4	2.7	15.8	4.6	45,687	6.5	1.8	3.6	33.1	6.5
Black/African Am.	16,991	9.4	1.7	8.5	91.4	8.1	27,902	11.0	1.8	9.4	156.4	9.9
White	28,466	4.7	1.8	2.6	28.3	4.5	53,165	5.7	2.0	2.9	52.8	5.4
Hispanic/Latino	9,082	12.0	1.0	11.5	51.1	9.8	17,849	14.4	1.2	13.0	107.1	12.5
Under 18	12,822	6.3	1.2	5.1	16.4	5.6	24,020	6.3	1.5	5.4	31.4	5.7
25–44	20,354	5.4	1.5	3.5	22.8	5.0	39,427	6.6	1.4	3.3	46.1	6.4
45–64	13,678	6.4	1.3	5.2	21.5	5.5	24,839	12.4	1.5	10.1	41.1	11.3
Affective disorders	16,254	5.8	1.4	4.3	NA	NA	23,898	7.1	1.3	5.2	NA	NA
Schizophrenia	16,912	7.4	1.6	6.2	NA	NA	25,922	16.2	1.7	14.5	NA	NA
Atten/cond/develop	8,113	8.6	0.8	7.6	NA	NA	13,219	8.8	0.9	8.2	NA	NA
RTCs	12,088	15.2	0.6	14.9	4.5	15.2	13,306	13.6	0.4	13.6	5.0	13.6
Male	6,141	15.4	2.8	5.6	4.7	15.3	7,310	15.1	2.6	5.4	5.6	14.9
Female	6,742	16.9	2.8	5.6	4.9	16.6	6,967	14.1	2.6	5.2	5.0	13.9
Black/African Am.	3,387	24.0	3.3	18.8	19.6	21.9	3,710	18.4	2.7	13.1	20.1	16.0
White	9,580	17.0	4.3	6.1	9.8	16.8	10,812	15.9	3.8	5.6	11.0	15.7
Hispanic/Latino	2,009	23.9	2.2	20.9	12.1	20.7	2,372	27.3	2.4	27.5	14.1	23.4
Under 18	5,241	14.0	5.2	11.0	7.5	13.9	5,466	11.2	5.4	10.8	7.6	10.8
25–44	5,373	23.7	4.2	14.7	5.2	19.1	6,466	24.8	3.9	14.8	6.5	20.6
45–64	3,424	25.3	2.6	15.4	4.7	19.3	2,994	26.5	2.3	20.4	4.1	19.8
Affective disorders	4,753	24.8	3.8	15.7	NA	NA	4,955	20.5	3.3	13.3	NA	NA
Schizophrenia	2,449	27.4	2.4	21.9	NA	NA	631	53.5	0.6	53.4	NA	NA
Atten/cond/develop	2,628	16.5	3.1	15.3	NA	NA	2,638	14.6	2.5	13.3	NA	NA
Freestanding OP/PC	35,894	5.6	1.4	4.6	13.5	5.6	54,206	6.1	1.4	5.2	20.4	6.1
Male	21,657	6.8	1.7	3.5	16.6	6.8	31,036	7.2	1.7	3.5	23.6	7.1
Female	20,401	6.3	1.7	3.4	14.6	6.2	31,023	6.7	1.7	3.3	22.2	6.6
Black/African Am.	14,560	11.9	2.0	10.3	76.8	9.9	21,578	14.4	2.2	12.9	118.4	12.6
White	28,079	6.6	2.6	3.9	27.3	6.2	45,896	7.4	2.7	3.9	45.4	7.1
Hispanic/Latino	11,857	17.3	1.7	16.2	70.9	14.9	13,820	14.9	1.5	14.3	78.9	12.3
Under 18	14,523	8.0	2.1	7.3	18.8	7.2	22,269	7.7	2.1	6.4	28.2	6.8
25–44	20,691	8.4	2.0	5.3	22.5	7.6	33,070	9.2	2.2	5.4	36.7	8.4
45–64	15,207	10.2	1.8	7.6	24.0	8.9	13,363	11.2	1.2	9.4	18.9	8.8
Affective disorders	16,877	9.0	1.8	6.3	NA	NA	18,323	9.7	1.7	7.8	NA	NA
Schizophrenia	15,593	11.4	2.0	9.4	NA	NA	10,650	15.2	1.1	13.6	NA	NA
Atten/cond/develop	8,067	10.6	1.2	10.0	NA	NA	9,623	9.9	1.0	9.6	NA	NA

Appendix C

Sources and Qualifications of Data from the Inventory of Mental Health Services in Juvenile Justice Facilities

CMHS obtained the universe of names and addresses of facilities from the 1997 Census of Juveniles in Residential Placement from the Office of Juvenile Justice and Delinquency Prevention (OJJDP), U.S. Department of Justice. The OJJDP database contained a broad diversity of facility types. Facilities ranged from correctional facilities solely housing youthful offenders, such as training schools, to places such as shelters that housed not only offenders, but also young people uninvolved in the juvenile justice system, such as those who had been neglected and abused, as well as those with mental, emotional, or behavioral health problems. Although shelters, for example, would more appropriately be called juvenile residential placements than juvenile justice facilities, for consistency in this chapter all facilities and places where youth involved in the juvenile justice system are housed are referred to as juvenile justice facilities.

The universe received from OJJDP included 3,578 facilities. However, this chapter is based on 2,798 facilities. CMHS deleted the following: all substance abuse, independent living, and foster care facilities; facilities that reported no offenders and no facility type; facilities that were found during telephone followup to be closed or out of scope, or could not be found and were believed to be closed; and facilities with fewer than three juveniles.

On the basis of recommendations by the advisors to the survey (figure C1), two survey forms were developed. According to these experts, the largest single proportion of places called juvenile justice facilities are group homes and halfway houses; however, a relatively small proportion (13 percent) of youth in juvenile justice facilities are in these homes and houses on one day. These are principally small community residences, like homes, privately owned or operated. They have few on-site services and rarely any staff to respond to surveys. Therefore, the form designed for larger, more complex facilities was not appropriate. A shorter version of the long form was developed and sent to group homes and halfway houses.

Facilities were sent the short form or long form on the basis of information about facility type received from OJJDP. Facilities receiving CMHS forms were also asked to self-classify into one of sev-

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Robert Phillips, American Psychiatric Association

Dan Toth, Rebound Programs

Farris K. Tuma, National Institute of Mental Health (NIMH)

Ecford Voit, NIMH

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*Reflect positions at time of meetings.

Figure C1. Experts serving on advisory panels*

en facility types. Where a respondent chose "other," CMHS followed OJJDP's convention for assigning type. Where a facility received the long form but then reported a facility type (group home or halfway house) that qualified it for the short form, or vice versa, the facility was moved within the database to be analyzed with its self-described facility type. Although most items on the forms were the same, some differed or were not included on the short form. For analytical purposes, where items were the same, data from both forms were merged, as in chapter tables 18.1 through 18.3. If an item appeared on only one form, the number of responses is smaller. Tables C1 and C2 provide detail on how different denominators were derived. Data in chapter tables are generally based on the following: the entire universe (2,798 facilities), whether or not any mental health services were available to youth; those facilities providing access to at least one mental health service (2,639 facilities); all facility types (except group homes and halfway houses) that provided access to any service and answered the more detailed long form questions (see table C1, column 2, where 1,291–98 = 1,193 facilities); or group homes and halfway houses that provided access to any service and answered the different short form questions (see table C1, column 3; 881 facilities).

Forms were initially mailed to each in-scope juvenile justice facility in June 1998 for response by mail. For a second mailing to facilities that had not responded, the reference date was changed from July 15 to November 18, and the 1-month reference period was moved from July to November. In February 1999, a 1-page certified letter was sent to remaining nonrespondents. At this time, facilities were offered the option to respond by fax instead of mail. Shortly after this mailing, remaining nonrespondents were called for the collection of core data items.

The overall response rate was 69 percent. Response rates, by facility type, are in table C3. To weight the respondents to the totals, missing values were imputed based on the following variables, which were considered to be critical for providing estimates for subcategories (in consultation with OJJDP): type of facility; ownership (either public or private); type of youth in facilities (either offender only or both offenders and nonoffenders); and facility size (3 to 30 juveniles and 31 and over). Remaining items were not imputed.

Table C1. Number of facilities providing at least one mental health service, by type of facility and form type

	Form type		
Type of facility	**Both forms**	**Long form**	**Short form**
All facilities	2,639	1,291	1,348
Detention centers	467	456	11
Shelters	218	201	17
Reception/diagnostic centers	32	26	6
Halfway house/group home	979	98	881
Ranches/camps/farms	127	108	19
Residential treatment facilities	664	257	407
Training schools	152	145	7

Source: *1998 Inventory of Mental Health Services in Juvenile Justice Facilities,* from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services

Table based on 2,639 facilities.

Table C2. Number of facilities providing at least one mental health service, by type of service and form type

	Form type		
Type of service	**Both forms**	**Long form**	**Short form**
Screening	1,796	932	864
Evaluation	2,063	802	1,261
Emergency	2,257	994	1,263
Medication	2,288	954	1,334
24-hour	967	274	693
Separate residential	1,039	328	711
Therapy	1,932	680	1,252

Source: *1998 Inventory of Mental Health Services in Juvenile Justice Facilities,* from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services

Table based on 2,639 facilities.

Table C3. Total and respondent facility characteristics, by type of facility

		Response Characteristics	
Type of facility	**Universe**	**Respondents**	**Response Rate (percent)**
All facilities	2,798	1,920	68.6
Detention centers	501	339	67.7
Shelters	269	205	76.2
Reception/diagnostic centers	32	20	62.5
Halfway house/group home	1,022	632	61.8
Ranches/camps/farms	139	69	49.6
Residential treatment facilities	673	568	84.4
Training schools	162	87	53.7

Source: *1998 Inventory of Mental Health Services in Juvenile Justice Facilities,* from the Survey and Analysis Branch, Division of State and Community Systems Development, Center for Mental Health Services

Appendix D

Sources and Qualifications of Data for Mental Health Practitioners and Trainees

Psychiatry

American Medical Association 2000–01 Physician Characteristics and Distribution in the United States

Scope of Data. Data are derived from the American Medical Association's (AMA) Masterfile, which contains current and historical data on all physicians practicing in the United States. Psychiatrists in the Masterfile include physicians who self-designated their practice specialty as psychiatry. This designation is determined by the largest number of professional hours reported by the physician on the AMA Physicians' Practice Arrangements (PPA) questionnaire, a rotating census that is sent to approximately one-third of all physicians each year. Data presented in the *Physician Characteristics and Distribution in the U.S.* are based on the self-designated practice specialty coding contained in the AMA Physician Masterfile. Data on medical residents and inactive psychiatrists have been excluded to reflect clinically trained and clinically active psychiatrists more accurately.

Limitations. Because the AMA Masterfile includes physicians who are self-designated or self-identified as psychiatrists, the data may include some physicians with no specialty psychiatric training.

1999 American Psychiatric Association Membership Data

Scope of Data. The 1999 American Psychiatric Association (APA) membership estimates were taken from the September 1999 APA membership data base. At that time, the total APA membership was approximately 40,000, which included 26,877 clinically trained psychiatrists believed to be actively practicing in the United States. The remaining APA members were disqualified as they fell into one of the following membership categories: psychiatric resident, medical student, and members not practicing psychiatry in the United States.

Limitations. The APA membership data are limited in that not all of the Nation's psychiatrists are members of the APA. However, unlike the AMA Masterfile data, all psychiatrists in the APA membership are board-certified or board-eligible and have some specialty psychiatric training.

The 1998 National Survey of Psychiatric Practice

Scope of Survey. The APA National Survey of Psychiatric Practice (NSPP) is a biennial survey of 1,500 randomly selected APA members. The primary purpose of the survey is to gather information, at the physician level, to assess the current status of psychiatric practice and to track trends in psychiatry.

Response Rate. Of the 1,500 members included in the study, 1076 (71.9 percent) completed the 1998 NSPP. Of those who completed the survey, 976 are considered active in psychiatry (excludes psychiatrists who are either retired or temporarily not in psychiatric practice).

Data Limitations. Because this survey does not include responses from non-APA members, caution should be taken when comparing these data with the 1988–89 APA Professional Activities Survey (PAS) estimates. Although this survey obtained a good response rate and included a very large number of respondents, the findings may be subject to some response bias. To reduce the impact of this bias, the data from respondents were weighted against the survey sampling frame (all APA members believed to be active in psychiatry) using APA membership information (age, gender, race/ethnicity, etc.).

1996–97 American Medical Association Physician Characteristics and Distribution in the United States

Scope of Data. Data are derived from the AMA Masterfile, which contains current and historical data on all physicians practicing in the United States. Psychiatrists in the Masterfile include physicians who self-designated their practice specialty as psychiatry. This designation is determined by the largest number of professional hours reported by the physician on the AMA PPA questionnaire, which is sent to approximately one-third of all physicians each year. Data presented in the Physician Characteristics and Distribution in the United States are based on the self-designated practice specialty coding contained in the AMA Physician Masterfile. Data on medical residents and inactive psychiatrists have been excluded to accurately reflect clinically trained and clinically active psychiatrists.

Limitations. Because the AMA Masterfile includes physicians who are self-designated or self-identified as psychiatrists, the data may include some physicians with no specialty psychiatric training.

1996 American Psychiatric Association Membership Data

Scope of Data. The 1996 APA membership estimates were taken from the July 1996 APA membership data base. At that time, the total APA membership was 40,866, which included 28,970 active psychiatrists practicing in the United States. The remaining 11,896 APA members included 5,438 psychiatric residents, 3,105 medical students, 2,035 psychiatrists not practicing in the United States, and 1,318 inactive psychiatrists.

Limitations. The APA membership data are limited in that not all of the Nation's psychiatrists are members of the APA. The APA membership data do, however, include a significant majority of the physicians in the AMA Masterfile. Unlike the AMA Masterfile data, all psychiatrists in the APA membership are board-certified or board-eligible and have some specialty psychiatric training.

1988–89 American Psychiatric Association, Professional Activities Survey (PAS)

Scope of Survey. The 1988–89 APA PAS gathered data on both APA members and nonmembers who had identified themselves in the AMA Masterfile as primarily specializing in psychiatry. APA members and nonmembers were combined and cross-checked against the APA membership file in order to remove duplicate records, resulting in a residual list of 10,091 self-designated psychiatrists and 34,164 APA members.

Response Rate. Of the 34,164 APA members included in the study, 23,126, or 67.7 percent, responded to the survey. The sample of 10,091 self-designated psychiatrists yielded a response rate of 28.9 percent, or 2,922 completed surveys. Of the 2,922 completed surveys, 341 respondents were found not to be psychiatrists, and 125 psychiatrists were already members of the APA. The remaining total of 25,582 yielded 19,498 "active" psychiatrists (excludes psychiatrists who are residents or fellows, retired, or not primarily active in psychiatry), of whom 17,930 were APA members and 1,568 were nonmembers.

Data Limitations. In order to assess potential sources of survey nonresponse bias, an analysis was conducted in which demographic characteristics of respondents were compared with those of nonrespondents. Although this analysis revealed no major differences between the groups, other factors may have affected response. Other possible limitations may include self-reporting error of psychiatrists with respect to the recollection and estimation of weekly and monthly activities (Dorwart et al. 1992).

Psychology

The American Psychological Association Member Survey

Sources and Qualifications of the Data. Who is to be counted as a mental health services provider in psychology?

Not all psychologists are trained for health service provider roles, and not all of those with the necessary training are actively engaged in providing these services. In order to determine the number of psychologists who are qualified to function as health service providers and the number who actually deliver relevant services, it was necessary to consider the type and amount of training and the acquisition of the appropriate credentials for delivering those services. This required the examination of several variables.

- Licensure as a psychologist—In all 50 States and the District of Columbia, licensure as a psychologist by a State board of psychological examiners is required for the independent practice of psychology. As is the case with most professions, these licensing statutes are designed in part to protect the public by ensuring that practitioners have met minimum training and competency requirements.
- Doctoral degree in psychology—A significant amount of advanced and highly specialized training is required in order to independently provide the full spectrum of mental health services. In psychology, the doctoral degree meets this requirement, and this definition has been incorporated into State licensing laws and criteria used by third-party payers to recognize psychologists as eligible for reimbursement for their services.
- Training in mental health services—Only some of the basic subfields in psychology deal directly with the provision of health and mental health services. These are clinical, counseling, and school psychology. Although these three fields constitute those for which graduate-training programs are accredited, a host of other postgraduate specializations exist in which psychologists can earn additional credentials (e.g., forensic psychology, clinical neuropsychology, behavior therapy, family psychology, and clinical hypnosis). Both field of degree and current major field were considered in this analysis.

Reported counts or estimates of mental health service providers in psychology do vary as a result of the differential application of these criteria by the individual counters. Examples include the counts of licensed psychologists by State boards, which often fail to account for the fact that some individuals may be licensed in more than one State—a situation characteristic of large metropolitan areas such as Boston and New York, or areas that are densely populated and near State borders, such as the Baltimore-DC-Richmond metropolitan statistical area. Dual licensure (as much as 12 percent in some States) will be more common in such areas due to the proximity of States and the density of population. In addition, early versions of State licensing laws did not specify degree level as a major criterion, with the result that individuals with less than a doctoral degree may have been "grandfathered" in when new statutes were established.

Another problem with relying on counts of licensed psychologists provided by the States is that certain States do encourage individuals in other non-health-service psychological subfields (e.g., industrial/organizational and experimental) who provide other kinds of services (organizational consulting, research and statistical services) to get their licenses. These people should not be counted among the clinically trained.

The APA Member Survey. The majority of data on psychologists were derived from the APA Directory data base based on a survey of APA members. The survey is no longer conducted at 4-year intervals, but is sent out to members on a rolling basis as pieces of information change in their files (e.g., mailing address), or as new members join. It is intended to be a census of all APA members. Its purpose is twofold—to provide updated individual listings for publication and to describe and monitor changes in the characteristics of APA members. The next mailing to all members was scheduled for the summer of 2000.

Section I of the questionnaire asks for updated information, including current address, email, phone, and fax information, date of birth, field and year of highest degree, major field and specialty areas, position title, employer, and licensure status. Most of this information appears in the Directory listing. Section II asks for more detailed information on (1) the nature of the individual's employment, such as primary and secondary employment settings, and a ranking of the three top work activities that the individual performed for each setting; (2) the individual's involvement as a psychologist in specific activities during the past 3 years; and (3) additional demographic information such as race, ethnicity, and receipt of professional degrees in areas other than psychology.

Procedures for Identifying Health Service Providers in Psychology. As previously mentioned, individuals who are trained or employed in psychology, work in a wide range of subfields and career roles. Thus, the criteria for inclusion as an active health service provider in psychology were as follows: (1) the individual is currently a U.S. resident; (2) the individual had earned a doctoral degree;

(3) the individual indicated that he or she was licensed by one or more States for the independent practice of psychology; (4) the individual reported being employed in psychology; and (5) the individual was involved in the provision of health and mental health services.

Those who are clinically trained constitute a slightly larger group, including all of the above, as well as those who (1) were licensed and trained in a health service provider subfield, but who reported no current involvement in direct services, or (2) were not licensed but stated that they had received their doctorate in a practice-related subfield.

Given these criteria and the information available on members, attempts were made to derive estimates of the population of both clinically active and clinically trained personnel in psychology, rather than to simply report figures pertaining only to the APA membership. First, estimates were made of the number in the APA membership who were clinically trained, and what percentage of this group was clinically active. Practice Directorate files of State applications for Committee for the Advancement of Private Practice (CAPP) grants included counts of the numbers of licensed psychologists residing in each State making application. These numbers represent unduplicated counts of doctoral-level psychologists for those States. These numbers were available for 40 of the 51 States (including the District of Columbia), almost 78 percent.

The raw numbers of licensed psychologists reported by each State licensing board were used for the remaining 18 States. Each count was reduced by 12 percent, which is the representation of multiple licensure (licensed in more than one State) found among APA members. When the 12-percent reduction dropped a State below the APA's count of the numbers of clinically trained psychologists for that State, the APA number was used. Thus, the estimate of clinically trained psychologists used in this chapter is based on a deliberate blend of several data bases.

Using only APA counts of clinically trained psychologists would have yielded an unreasonably low count, one that was less than the number reported 2 years ago in an earlier version of this chapter. This did not make sense. Using only State licensing board raw counts of licensed psychologists would have resulted in what appeared to be an uncomfortably inflated count. This also did not make sense. There was little chance that psychology could have reached the State numbers based on the numbers currently graduating from the pipeline with doctoral degrees in appropriate fields in psychology.

These numbers represent estimates of the total numbers of clinically trained and clinically active psychologists overall, in each of the regions, and in each of the States. The percentages reported in the tables are based on the responses to the APA membership survey.

The number of clinically active psychologists in 1999 nationally was derived by using the percentage of clinically trained APA members who were clinically active. The number of clinically active psychologists in 1999 was estimated at just over 76 percent of the clinically trained, or 59,263.

Qualifications of the Data. As previously mentioned, the information reported in the tables was based on analyses of the APA membership coupled with State-by-State data on the population of licensed psychologists, including those who did not belong to the APA. This strategy assumes that those who are licensed, but do not belong to the APA, are similar to licensed psychologists who do belong to the APA. Previous research on both APA members and nonmembers indicated that the APA membership has been quite representative of doctoral-level health service providers in psychology with respect to demographic characteristics, education, and employment (Howard et al. 1986; Stapp, Tucker, and VandenBos 1985). Comparisons of member data with data from the National Science Foundation (NSF) also revealed similarities for doctoral-level psychologists. See NSF's biennial series of reports on the doctoral science and engineering population (Characteristics of Doctoral Scientists and Engineers in the United States, 1997, NSF 00-308) for these national data. The growth in the membership of APA who report being active direct service providers parallels the national data on growth in degree production in the relevant fields as well as growth in employment settings focusing on service provision.

At least 63,690 clinically trained doctoral-level psychologists were members of APA in 1999. This was 82 percent of the estimated 77,456 clinically trained psychologists identified nationally for this chapter. Using State numbers for licensed psychologists with no reduplication plus the numbers reported in the CAPP grant applications would have resulted in an overestimate given current graduation rates in the service provider subfields (about 2,800 per year) and the overall count we had provided in earlier years.

Because not all members responded to the APA membership survey, the extent to which the results are affected by nonresponse bias is unclear. Earlier comparisons of basic biographical information for nonrespondents with the data for respondents did not indicate marked differences with respect to highest degree, sex, and age. Because a large proportion of members did not specify their race or ethnicity and because the proportions seem somewhat low given the proportions reported in other national data bases, we do urge caution in applying these data. Conclusions could not be developed for information on employment. Thus, for example, we cannot be sure whether psychologists in certain types of employment settings were less likely to respond.

Psychological personnel at the master's, specialist, and baccalaureate levels also work in the general medical and mental health specialty areas. These individuals were not included in our analysis, first because the data are based on APA membership, and this membership is not representative of those with less than a doctoral degree. Second, because the current licensing laws in most States require a doctorate in order to sit for licensure as a psychologist, this group is an increasingly small minority of psychologists qualified for the independent practice of psychology.

For additional information on the data presented in chapter 17 and on the characteristics of psychologists, please contact the Research Office, American Psychological Association, 750 First Street, NE, Washington, D.C., 20002, or call (202) 336-5980, visit the Web site at http://research.apa.org or e-mail at *research@apa.org*.

The 1994 American Psychiatric Association Membership Directory Survey

Scope of Survey. The APA membership directory was a full membership survey of 38,242 members. The primary purpose of the survey was to compile an updated directory of APA members, with a secondary purpose to gather data on psychiatrists' primary and secondary practice settings and professional activities.

Response Rate. Of the 38,242 members included in the study, 27,843 (72.8 percent) completed the survey. Of those who completed the survey, 20,579 provided data on their primary practice setting, while 14,773 provided data on their secondary employment setting.

Data Limitations. Because this survey did not include responses from nonmembers of APA, the setting data obtained from this population are not directly comparable with the 1982 APA PAS and the 1988–89 APA PAS setting estimates. Consequently, inferences and trends in work setting data cannot be directly drawn between these populations. Although this survey obtained a good response rate and included a very large number of respondents, the findings may be subject to some response bias.

Social Work

Data Collection for the National Association of Social Workers (NASW)

The data for NASW were collected from both applications for new membership and annual membership renewal forms. As the data are collected, they are entered into the membership data base on a continuous basis. Data exist for the large majority of the NASW membership, and all tables had less than 20 percent missing data. Tables are based on current membership information as of April 30, 1996.

The data collection forms ask for the highest degree awarded (either in social work or in another field), sex, and date of birth. Other questions request information about the following:

- *Ethnic* origin
- *Auspices* of primary and/or secondary jobs (auspices include such things as public, private, sectarian, etc.)
- *Function* on the job (primary and/or secondary), such as direct service, supervision, and research
- *Setting* of primary and/or secondary jobs, such as social service agency, private practice, hospital, and outpatient facility
- *Practice area* of primary and/or secondary jobs, such as children and youth, family services, mental health, school social work, alcohol/drug abuse, and services to the aged
- *Total years* of social work experience since first social work degree

The data were drawn from the 152,067 total NASW members, selecting the clinically trained as those with master's or doctoral degrees who were not retired. Clinically active social workers were the subset that reported they were engaged in direct practice, supervision, or agency-based training, the last category representing less than 1 percent. It is critical to note that these numbers represent only NASW members and that the universe of social workers is two to three times larger. Compared to Census Bureau numbers, NASW has between 30 to 50 percent of the total number of trained social workers. Therefore, the numbers in the tables significantly understate the total numbers of trained social workers.

Psychiatric Nursing

This study uses a subset of the 1996 Division of Nursing's (DON) National Sample Survey of Registered Nurses data set. The methodology of this study has been extensively documented (DON 1997). Briefly, a complex stratified sampling design is used to randomly sample the population of registered nurses licensed in the United States. States are sampled at different rates to allow for State-level estimates. The disproportional stratified sampling methodology requires accounting for the design effect in analyses.

This subsample was based on the 29,766 respondents living and working in the United States. Requirements for sample selection included formal education as a clinical nurse specialist or nurse practitioner in psychiatric mental health nursing, with highest education in nursing being at either the master's or doctoral level; 194 nurses met these criteria. Further review showed that the DON had not classified three as advanced practice nurses. As master's education did not focus on a clinical practice area, these nurses were deleted, resulting in a sample size of 191. This is the sample used to determine general estimates on clinically trained psychiatric nurses. Of these, 173 were employed. This group was used to generate estimates on the employed subset of clinically trained psychiatric nurses. All estimates are reported for clinically trained nurses. Due to the small sample size, it would be difficult to get reliable estimates on the subgroup of clinically active nurses. It is estimated that there are 17,318 trained and 15,330 employed psychiatric nurses.

Analyses were weighted to the population using a standard statistical program for generating means and frequencies. Standard error estimation was conducted using the SUDANN software package to account for the study's design effect for selected variables.

Limitations of the study relate mainly to the small sample size. In addition, the number of settings variable reflects the number of nursing positions nurses hold. There is no information on settings of non-nursing positions. Nor is there any information on positions that include work in more than one setting.

Counseling

Counselors may be defined in a number of ways. The purpose of this report is to estimate the number of available counselors who have the training necessary to provide independent or team treatment of populations in need of therapeutic mental health intervention and prevention and who are credentialed to provide such treatment. Sources used in calculations are National Board for Certified Counselors (NBCC) *National Study of the Professional Counselor* (2000); NBCC *1998 State Counseling Licensure Board Survey*; United States Bureau of Census data (1999); American Counseling Association 2000 membership data; data base queries of NBCC; and *Counselor Preparation, 1999–2001: Programs, Faculty, Trends* 10th ed. (2000).

Most figures reflect a conservative estimate based on national certification, association membership, State licensure, and United States Bureau of Census data. These data inform the continued systematic collection of statistics about the counseling workforce. The collection of these data has reinforced the need for the counseling profession to collect systematic and equivalent data with other mental health professions.

Marriage and Family Therapy

Data Collection

The data for marriage and family therapy were collected from several sources: the Marriage and Family Therapist Practice Patterns Survey, the American Association for Marriage and Family Therapy (AAMFT) Membership Database, the Annual Report for Accredited Programs submitted to the Commission on Accreditation for Marriage and Family Therapy Education (COAMFTE), and data collected by AAMFT from State marriage and family therapy regulatory boards on the number of licensed or certified marriage and family therapists (MFTs).

The count of MFTs for each State and the United States was derived from data collected by AAMFT in 1995 from State marriage and family therapy regulatory boards on the number of licensed or certified MFTs. For those States that did not regulate MFTs in 1995, the count of clinical members from the AAMFT Membership Database was used.

The count for the U.S. total (46, 227) from table 3 was used for tables 1, 2, 4, 5, 6, and 7, with the data on the details of these tables coming from the Marriage and Family Therapist Practice Patterns Survey conducted by William J. Doherty of the Family Social Science Department of the University of Minnesota in the summer and fall of 1994 and reported by Doherty and Simmons (1996).

The data for table 8 are from the Annual Report for Accredited Programs submitted to COAMFTE and the count of associate members (postdegree supervision students in other accredited programs) and student members (predegree students in other accredited programs) from the AAMFT Membership Database.

The Marriage and Family Therapist Practice Patterns Survey

The Marriage and Family Therapist Practice Patterns Survey was commissioned by the AAMFT Research and Education Foundation and built upon an investigation of the clinical practice patterns of MFTs in Minnesota by Doherty and Simmons (1995). The survey consisted of three parts. Part I asked general questions about the respondent's demographic and educational background and practice setting, along with a series of questions about current caseload, types of problems seen and diagnoses used, types of therapy employed (individual, couple, family, group), areas of competency, and a variety of questions about reimbursement. Part I was intended to be completed with minimal reference to clinical records, and for some of the questions—such as frequency of presenting problems and diagnosis—the therapist was expected to estimate answers.

Part II of the survey asked for detailed information on the therapist's three most recently completed cases. A completed case was defined as one "where therapy has ended, at least for now, and no specific follow-up is scheduled." One-session assessments and consultations were excluded. Detailed information on presenting problems was sought, as well as diagnosis assigned, frequency of sessions, number of sessions, method of payment, presence of chronic illness or other health care problems, and other case information. A series of questions was also posed regarding the therapist's perceptions of the outcomes of treatment for a variety of areas of functional change in clients' lives. Data were requested on up to eight participating clients for each case. Client demographics were reported (age, gender, racial or ethnic background, education), as were client relationships (marital or committed partners, parent-child relationships). One item in Part II required coding of presenting problems, which therapists were asked to list in their own words. Therapists' responses were coded into more than 30 nonoverlapping categories.

Part III, completed anonymously by clients, included questions on their satisfaction with the services they received and with the functional outcomes of their treatment. For cases that primarily involved the treatment of a child, parents were asked to complete a child version of the outcome questionnaire. Therapists answered the same outcome questions that clients did. The client satisfaction measure was adapted from Attkisson and Zwick's (1982) eight-item Client Satisfaction Questionnaire, an instrument with established reliability and validity in the area of psychotherapy research. It uses a 4-point Likert scale with a range from "very dissatisfied" to "very satisfied." The client outcome measure developed for this study consists of nine health transition questions in which clients are asked to compare their current level of functioning in various life domains (such as overall health, emotional health, work, and family) with their level of functioning prior to starting therapy (Feinstein 1987). Each item included a 5-point Likert response scale ranging from "much worse" to "much better."

In August and September 1994, AAMFT clinical members in the participating States received a joint letter from their State leadership and volunteer coordinator outlining the challenges facing the practice and profession of marriage and family therapy at both the Federal and State levels. That letter also advised members about the practice patterns survey and encouraged maximum participation in the study.

The participating States were selected from from those State divisions of AAMFT that volunteered in response to a request for proposals distributed by the AAMFT Research and Education Foundation to all of its State and provincial divisions in the United States and Canada. The 15 participating States are Alabama, California, Colorado, Florida, Illinois, Massachusetts, Michigan, Mississippi, New

York, North Carolina, Ohio, Pennsylvania, Tennessee, Texas, and Wyoming. A random sample of 1,716 clinical members was drawn from a population of more than 8,600 clinical members in the 15 States. States with fewer AAMFT members were oversampled relative to larger States in order to provide State-level data as well as national data. Throughout the data collection period, therapists received letters from the volunteer coordinator and divisional leaders in each State encouraging them to participate in the study.

In September 1994, each therapist received a letter of invitation to participate in the study, along with the survey, from William J. Doherty, Ph.D., and Deborah S. Simmons at the University of Minnesota. A stamped return envelope, addressed to the volunteer coordinator in each State, was also enclosed. In addition, each member of the sample received stamped return envelopes, addressed to the researchers at the Family Social Science Department of the University of Minnesota, to be sent to clients whose cases were being reported on. Therapists were asked to complete and return the survey within 3 weeks of receiving it.

Volunteers in each State contacted the therapists by telephone within 2 weeks after the survey had been mailed to ensure that they had received the survey and to answer any questions. Of the 1,716 therapists in the sample, 178 were ineligible because they were deceased, had moved out of State, were no longer practicing marriage and family therapy, or were ill.

After 3 weeks, many of the volunteer coordinators contacted nonrespondents by letter, postcard, or telephone and often sent a second copy of the survey. Another round of follow-up phone calls was made by the volunteers in each State within a week after the reminder contact had been made to answer nonrespondents' questions and urge therapists to participate in the study. Finally, after the surveys were returned, many therapists in the sample received a telephone call from the volunteer coordinator to clarify responses or to request missing data.

The final response rate was 34.3 percent, or 526 of the eligible 1,538 therapists. This response rate is typical for questionnaires sent to professionals, and varied considerably among the States. The principle reason given for nonparticipation was being too busy to complete the lengthy questionnaire. All of the responding therapists completed Part I of the survey and 53.8 percent completed Part II, providing data on 850 cases. The response rate for clients was 62.3 percent. A State-by-State comparison of the major findings showed a pattern of similarity, irrespective of State response rate. The findings are quite similar to those of the Minnesota study, which had an 80-percent response rate.

The AAMFT Membership Database

Data for the AAMFT Membership Database are collected from both applications for new membership and from annual membership renewal forms. As the data are collected, they are entered into the membership data base on a continuous basis.

Members of AAMFT are coded in the membership data base according to their category of membership:

- Clinical Membership—persons who have completed a qualifying graduate degree in marriage and family therapy (or in a related mental health field and a substantially equivalent course of study) from a regionally accredited educational institution and have 2 years of postdegree supervised clinical experience in marriage and family therapy.

- Associate Members—persons who have completed a qualifying graduate degree in marriage and family therapy (or in a related mental health field and a substantially equivalent course of study) from a regionally accredited educational institution but have not yet completed 2 years of postdegree supervised clinical experience in marriage and family therapy. Associate Membership is limited to 5 years, since it is anticipated that Associate Members will advance to Clinical Membership.

- Student Membership—persons currently enrolled in a qualifying graduate program in marriage and family therapy (or in a related mental health field and a substantially equivalent course of study) in a regionally accredited educational institution or a COMAFTE-accredited graduate program or postdegree institute. Student Membership is limited to 5 years, since it is anticipated that Student Members will advance to Associate, then Clinical Membership.

- Affiliate Membership—members of allied professions and other persons interested in marriage and family therapy. Affiliate Members come from related fields such as family medicine, family mediation, family policy, and research. The Affiliate Membership is a noncredentialing, nonevaluative, and nonvoting membership category.

COAMFTE Annual Report for Accredited Programs

Annually, the programs accredited by COAMFTE submit standard written reports concerning compliance with the accreditation standards, including, among other data, a list of all students currently enrolled in the marriage and family therapy program. Data reported include the student's name, year in program, gender, ethnicity, and academic background. Data on the number of students in each program were collated for table 8 from the most recent annual report of the accredited programs, which was either 1995 or 1994.

School Psychology

Who Is Counted as a School Psychologist?

In most States, professional school psychologists are certified to practice within school settings and nonschool settings by each State's department of education. Every State has a certification for school psychology; however, some States use more than one title for professionals qualified to be called school psychologists. State-by-State standards for certification and licensure are published by the National Association of School Psychologists (NASP) (1995). Forty-seven States (including the District of Columbia) require academic standards consistent with the Nationally Certified School Psychologist (NCSP) certification. One State, Hawaii, requires a doctorate to use the title. Three States require a master's degree with unspecified credit hours. All States require a supervised internship. Students graduating from NASP/National Council for Teacher Education-approved programs meet the NCSP credentialing standard and may receive the NCSP credential upon receiving a satisfactory score on the national examination. States that have upgraded their standards over the past 10 years have "grandparent" persons who do not meet the academic requirements of a 60-credit-hour master's or specialist degree, a 1,200-hour supervised internship, and other requirements noted in the body of the report.

Database

The data in this report are based on data gathered yearly by the U.S. Department of Education (USDOE) and found in its *Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act.* These data are required to be reported by each State education agency, which in turn has data reports from each local education agency. These data are required to be gathered to ensure that each school system is maintaining its effort to provide a "free and appropriate public education" to all children who are disabled and in need of special education and related services.

The data reported from each State education agency list as school psychologists only persons who are State certified or licensed. In fact, it considers person provisionally providing school psychological services under the category of unfilled positions.

NASP Membership Data

NASP total membership was 20,902 as of June 1998. NASP has several membership categories, of which three are critical to this report: regular, student, and retired.

Regular members must be one of the following:

- Currently credentialed and working as a school psychologist.
- Certified and working as a supervisor or consultant in school psychology.
- Primarily engaged in the training of school psychologists at a college or university.

Excluding international membership, NASP regular membership as of June 1998 was 15,008.

Student membership includes students enrolled half-time or more in programs leading to an advanced degree or post-master's certificate in school psychology or doctorate, as verified by their program advisor. Student membership as of June 1998 was 4,656.

Retired membership requires the retired school psychologist to have been a member for 5 consecutive years and retired from remunerative professional activity. Retired membership as of June 1998 was 737. It is presumed that these retired members are not clinically active in the profession of school psychology.

All regular and student members and all those holding an NCSP certificate must agree to abide by the NASP professional standards and code of ethics. By 1991, nearly 15,000 school psychologists had received the NCSP credential.

There are approximately 3,000 school psychologists certified as NCSP who are not members of NASP. As noted above, most State certification systems require the equivalent academic requirements of NCSP. Several States will now accept NCSP as the necessary documentation for State certification.

Data Reported in Tables

Each year, NASP requests that membership respond to a set of computer-recorded demographic questions, including age, sex, ethnicity, position, employment setting, salary, student service ratio, and years of experience. There is no obligation to respond to these requests, and more than 10 percent ignore all requests. Each of the 13 items is responded to at different rates, and therefore the accuracy of the data is unknown.

For example, only 13,827 responded to "employment setting," and only 9,634 responded to "years of experience." However, when the responses are compared to mailed random surveys carried out over the years (Curtis et al. in press; Fagan 1988; Reschly and Wilson 1992), the patterns are quite similar, giving a degree of assurance that these data can be applied to the general population of certified, employed, clinically active school psychologists reported by the USDOE.

To determine the 1994 number of school psychologists reported in table 1, the authors used the ratio of NASP members who are certified, including those who are university trainers and administrators, to those who are not so specified. This produced a ratio of 1 clinically active to 1.11 clinically trained. The number reported by the USDOE was then multiplied by that radio to secure the total of 22,214. This correction factor, based on more accurate data (Lund and Reschly 1998), replaces the 1.07:1 ratio applied to calculate the numbers reported in 1992. This 1.07:1 ratio was applied to USDOE data from 1988 for table 1 to provide some longitudinal reference consistent with other professions.

The data in tables 2, 4, 6, and 7 are based on ratios and percentages reported by NASP members' responses to the membership questionnaire applied, when appropriate, to the USDOE adjusted number. The data in table 3 are the State-by-State data reported for 1998, which are the best data that exist for school psychologists who are clinically active at the present time. Table 5 is based on the assumption that most school psychologists are limited to a single employment setting. This is generally the case. Since about 10 percent of school psychologists are licensed to practice outside the school setting, there may be a second setting for these professionals. However, NASP does not request any data on this factor. Therefore, "NA" is noted both for "two or more settings" and the "part-time" category.

Table 8 represents the number of school psychology students in programs approved by NASP/NCATE as reported by the Director of Certification from the NASP data base.

Qualifications of the Data

The USDOE data are a record of State-certified or licensed school psychologists reported for 1994–95 who serve children with disabilities in schools or school-related settings. These data are based on full-time equivalents rather than individuals. Therefore, there may be more individuals certified than this number. Furthermore, the data do not exclude some contracted persons. The data also may exclude school psychologists who do not provide services to children with disabilities under the Individuals with Disabilities Education Act. For example, school psychologists are employed in Head Start programs, which may be administered by another State agency. School psychologists serving under Part H, the infant and toddlers disability program, may not be included in this USDOE count. Finally, may States have school psychologists employed under State pupil services laws and under Title I of the Improving America's School Act of 1994.

Without referencing the USDOE data, Fagan and Sachs-Wise (1994) report a consensus figure of between 20,000 and 22,000 school psychologists for 1994. It may be that these numbers underrepresent the total clinically active (and, thus, clinically trained) population of school psychologists by as much as 5 to 10 percent. This underestimation is consistent with the findings of Lund and Reschly (1998).

Adjusting the USDOE data required application of membership percentages to those data and to data provided by Lund and Reschly (1998). Since the membership data are consistent with the data on a random sample of 6,470 school psychologists (Curtis et al. in press; Reschly and Wilson 1992), it may be assumed that the membership data can be generalized to the USDOE data without any known bias.

The growth in the USDOE numbers over the 7-year span of 1988 to 1995 is progressive, but not dramatic. The number of elementary and secondary students is growing, thus causing a shift in the ratio of professionals to population. Table 3 should be read with extreme caution. It is erroneous to perceive the State population as the potential service population for school psychologists. School psychologists serve children aged 5 through 18, in general, and a subset of children aged 0 through 21 who have, or are at risk of having, a disability. The *Digest of Educational Statistics* (U.S. Department of Education 1997) estimates that there are about 52.7 million children aged 6 to 17, or about 19.6 percent of the 268.8 million total population in 1998 (*Statistical Abstract of the United States,* U.S. Bureau of the Census 1997).

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